



**COMPACT TRIPLE COMBO
QUICKLOOK
LOG**

COMPANY: **BILL BARRETT CORPORATION**
 WELL: **MILLER FEDERAL 24D-31-691**
 FIELD: **GIBSON GULCH**
 PROVINCE/COUNTY: **GARFIELD**
 COUNTRY/STATE: **U.S.A. / COLORADO**
 LOCATION: **SHL: 2' FNL & 2437' FEL**
BHL: 1140' FSL & 1998' FWL

SEC: 6 TWP: 7S RGE: 91W Other Services
 API Number: 05-045-18660
 Permit Number: _____
 Permanent Datum G.L., Elevation 6266 feet
 Log Measured From K.B. @ 22 FEET above Permanent Datum
 Drilling Measured From K.B. _____

Elevations:
 KB: 6288.00 feet
 DF: 6287.00 feet
 GL: 6266.00 feet

Date	12-DEC-2010	
Run Number	ONE	
Depth Driller	7626.00	feet
Depth Logger	7635.00	feet
First Reading	7632.00	
Last Reading	790.00	
Casing Driller	788.00	feet
Casing Logger	790.00	feet
Bit Size	7.875	inches
Hole Fluid Type	LSND	
Density / Viscosity	9.20 lb/USg	55.00 CP
PH / Fluid Loss	9.20	7.20 ml/30Min
Sample Source	FLOW LINE	
Rm @ Measured Temp	1.80 @ 80.0	ohm-m
Rmf @ Measured Temp	1.44 @ 80.0	ohm-m
Rmc @ Measured Temp	2.16 @ 80.0	ohm-m
Source Rmf / Rmc	CALC	CALC
Rm @ BHT	0.857 @ 172.0	ohm-m
Time Since Circulation	4 HOURS	
Max Recorded Temp	172.00	deg F
Equipment Name	COMPACT	
Equipment / Base	13045	GJD JCT
Recorded By	S. LACKEY	
Witnessed By	JIM BOYD	

BOREHOLE RECORD Last Edited: 13-DEC-2010 06:02

Bit Size inches	Depth From feet	Depth To feet
8.750	788.00	4246.00
7.880	4246.00	7625.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	788.00	36.00

REMARKS

TOOLS: SHA, MCG, MDN, MPD, SKJ, MFE, MSS AND MAI RAN IN COMBINATION

HARDWARE: MPD: (1) 8 INCH PROFILE PLATE
 MAI: (1) 0.5 INCH STANDOFF
 MSS: (3) 1 INCH STANDOFF
 MDN: (1) DUAL BOWSPRING

2.68 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.

ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

TIGHT PULLS, BOREHOLE SIZE, AND RUGOSITY WILL AFFECT REPEATABILITY AND DATA QUALITY.

8.75 INCH BIT USED FROM SURFACE CASING TO 4246 FEET.

CALIPER CHECK IN CASING PRESENTED, REFERENCE I.D. = 8.95" (9 5/8", 36 LB/FT CASING)

TOTAL HOLE VOLUME FROM TD TO SURFACE CASING =2695 CU.FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING = 1950 CU.FT.

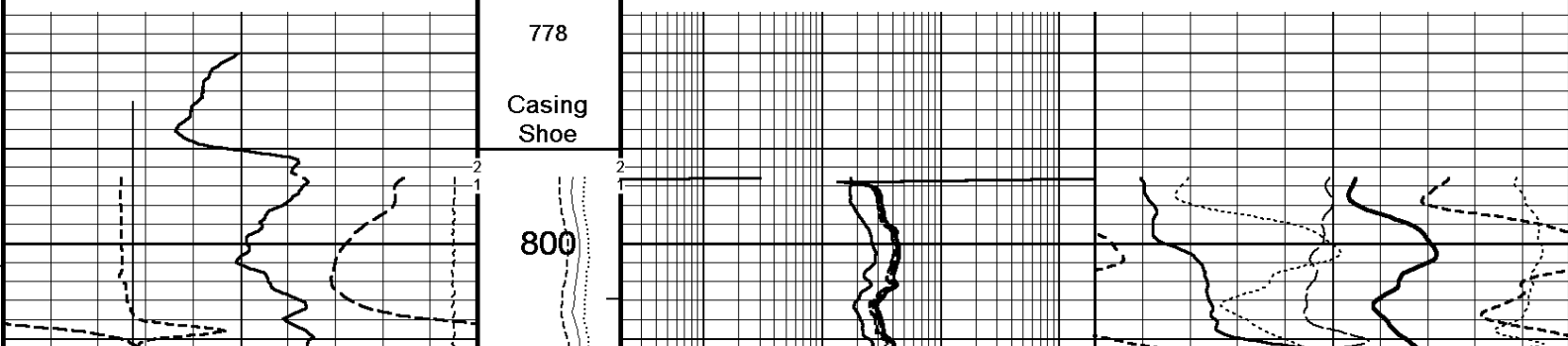
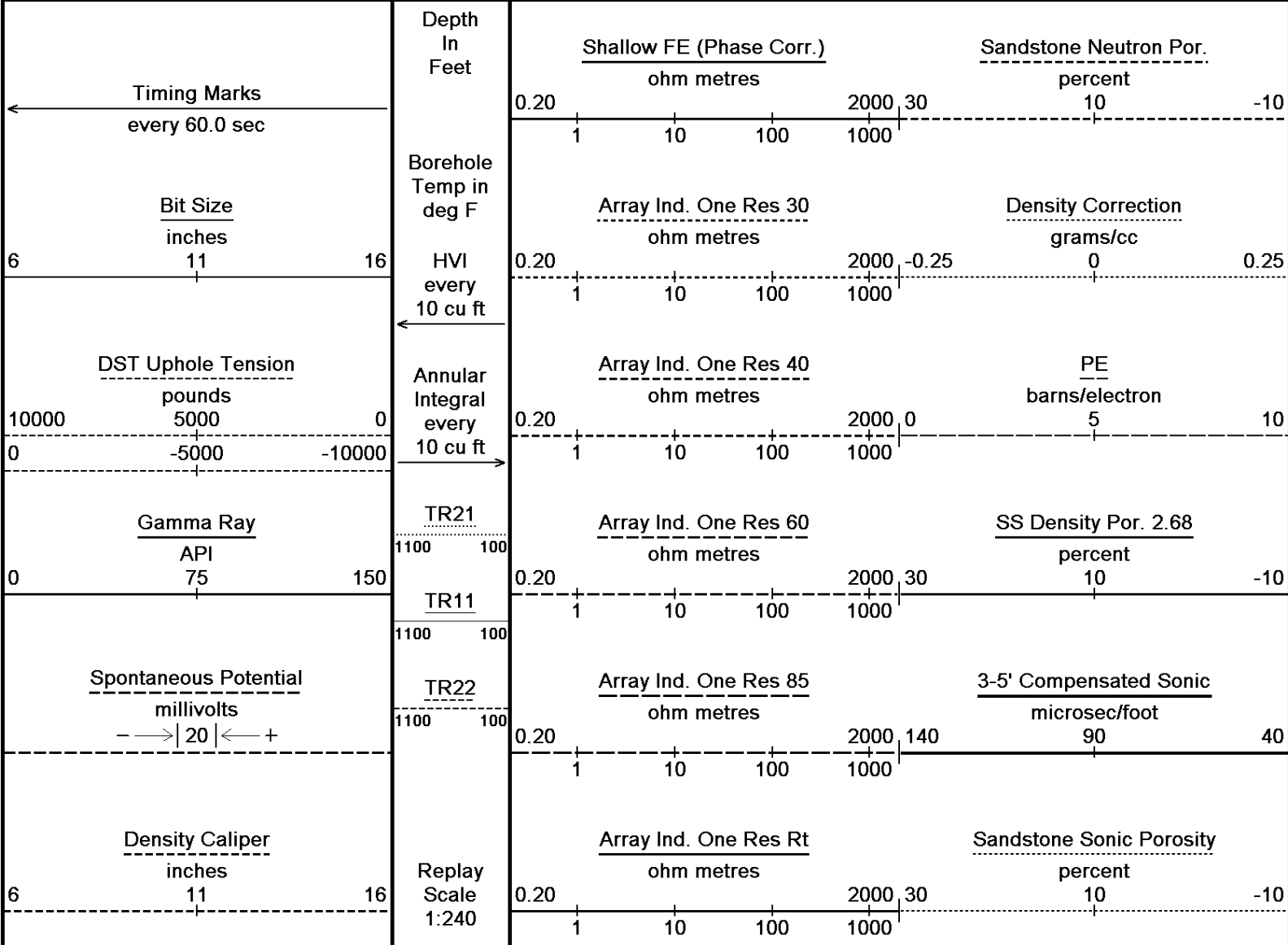
SERVICE ORDER: #3526206

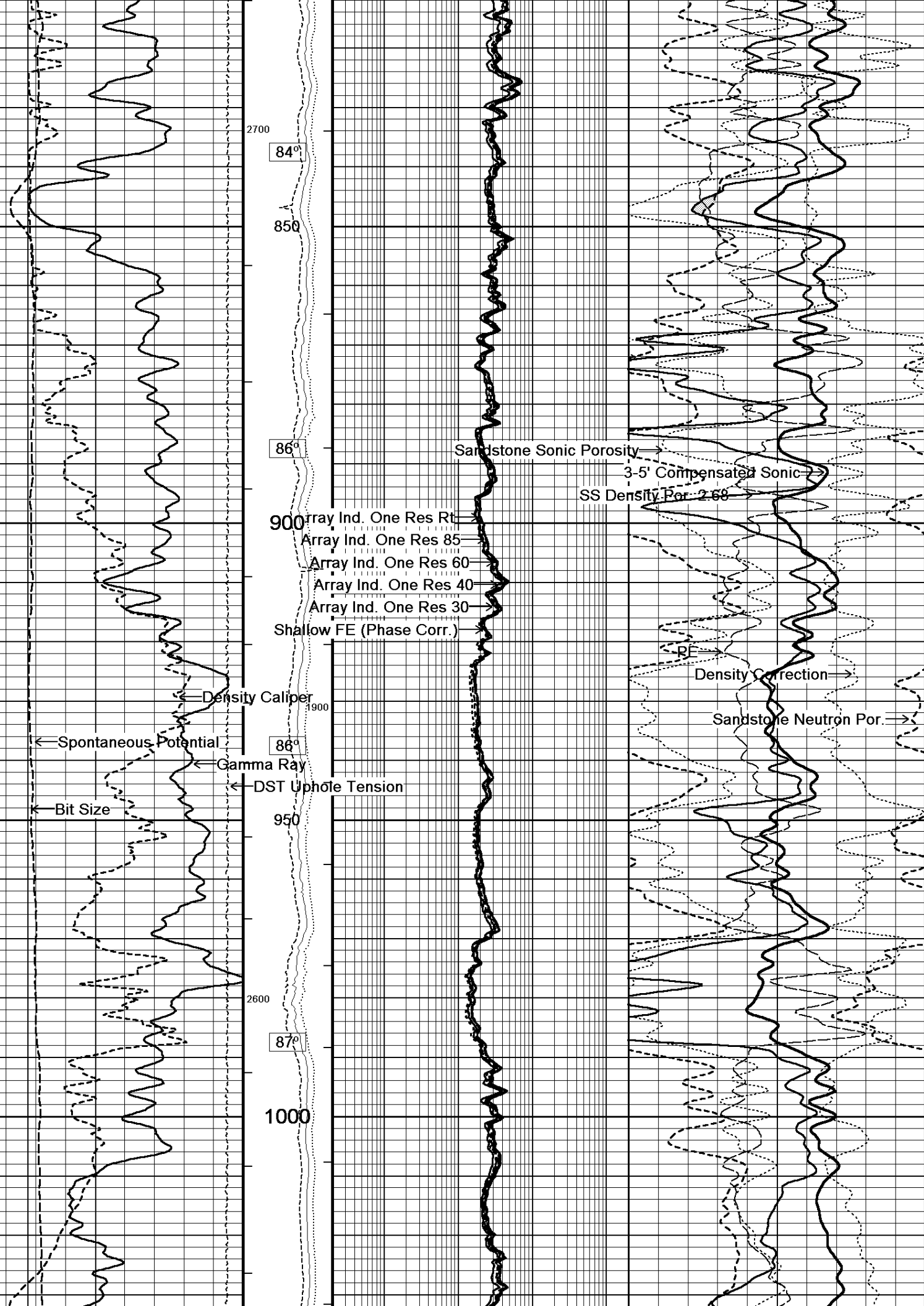
RIG: PATTERSON #313

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

5 INCH MAIN LOG

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 13-DEC-2010 06:02
 Filename: C:\Minimus\LOGS\Bill Barrett\Miller Federal 24D-31-691\MAIN.dta Recorded on 13-DEC-2010 02:10
 System Versions: Logged with 10.08.1568 Plotted with 10.08.1568





2700

84°

850

86°

900

86°

950

2600

87°

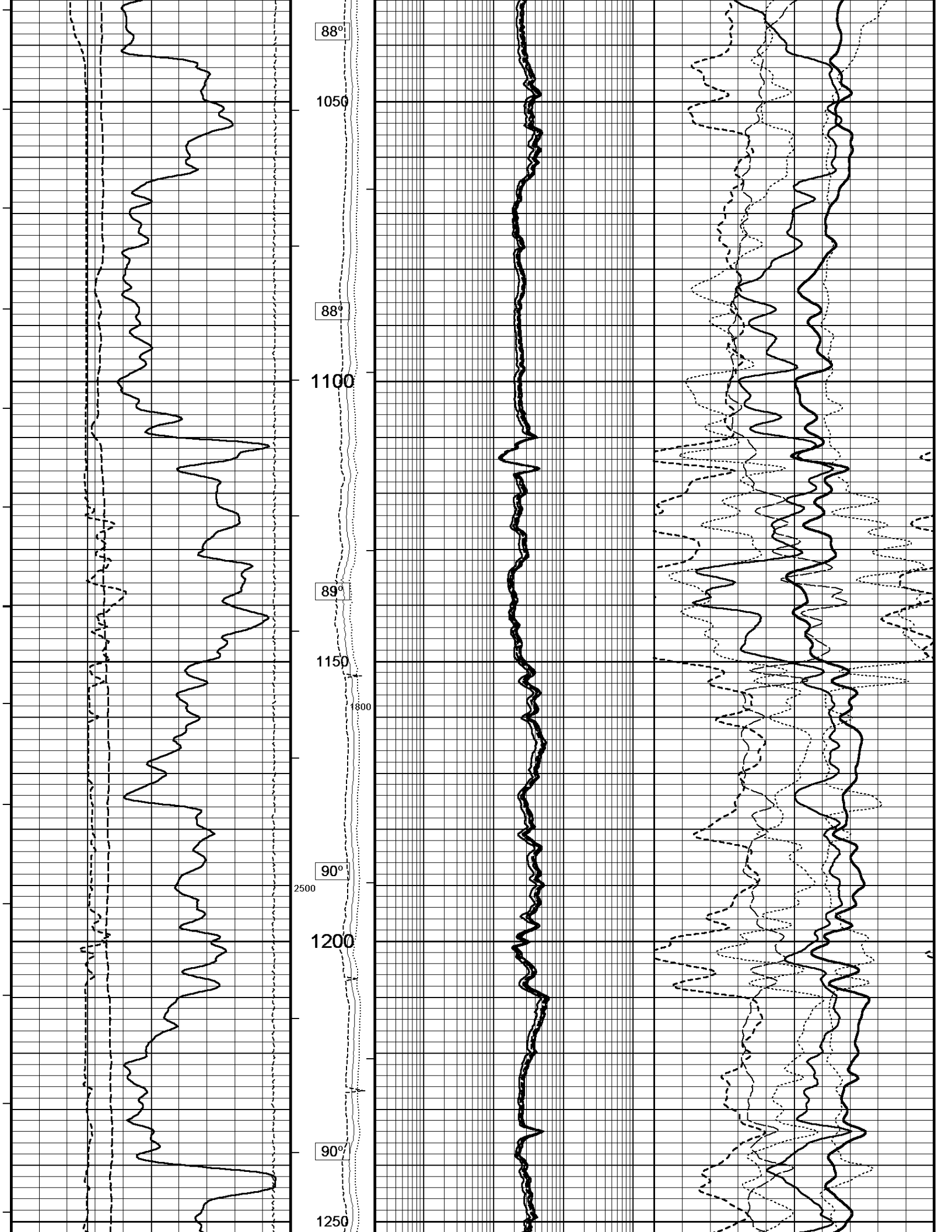
1000

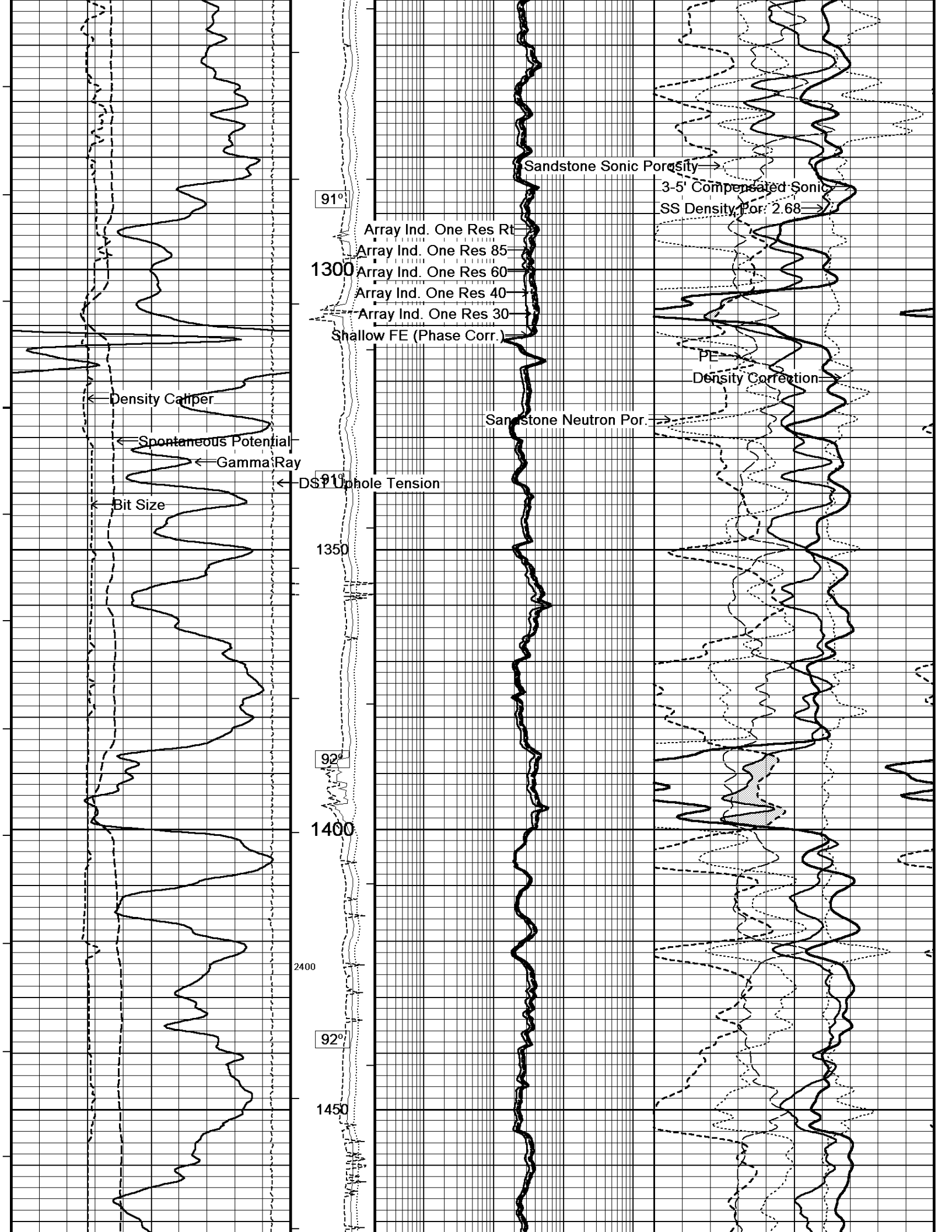
Array Ind. One Res Rt
Array Ind. One Res 85
Array Ind. One Res 60
Array Ind. One Res 40
Array Ind. One Res 30
Shallow FE (Phase Corr.)

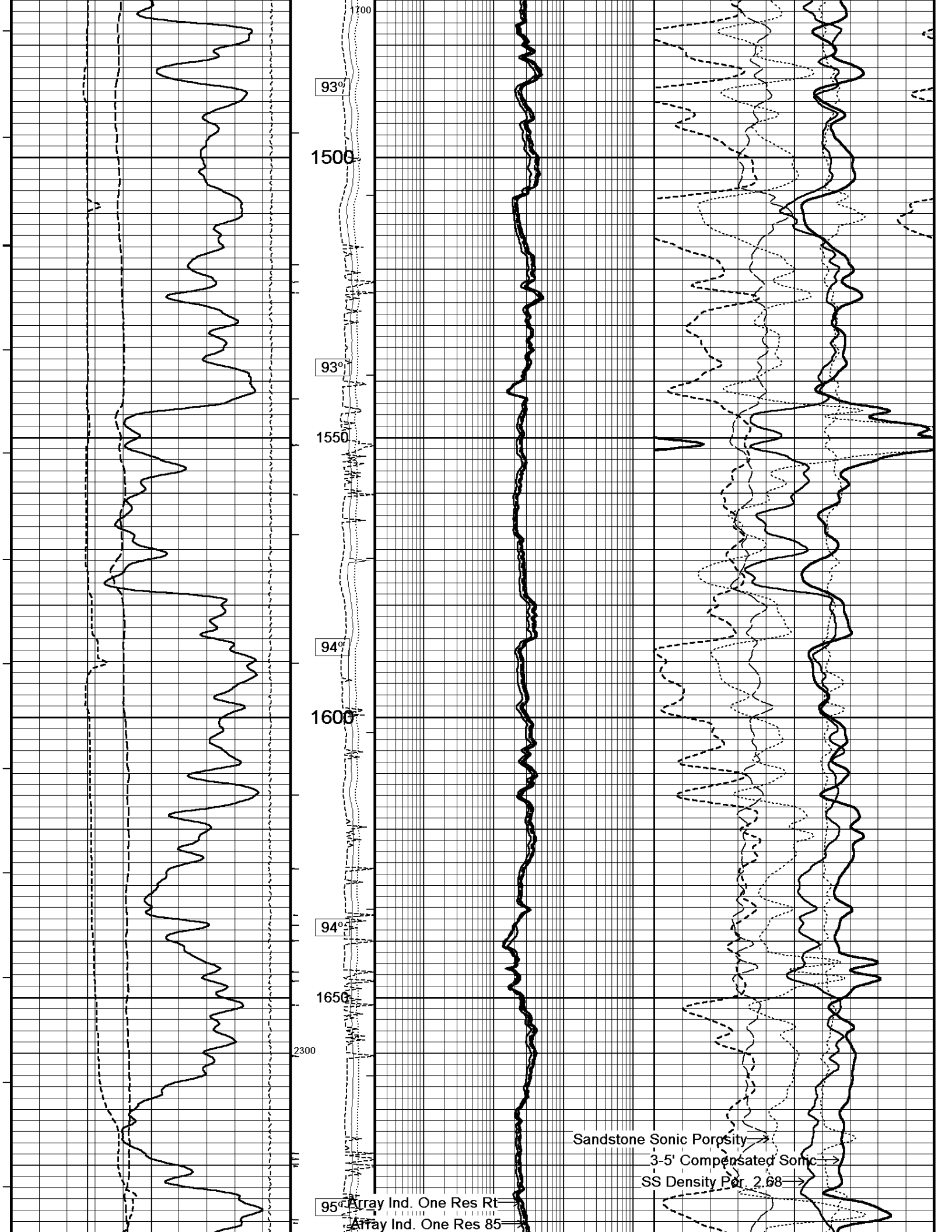
Sandstone Sonic Porosity
3-5' Compensated Sonic
SS Density Por. 2.68

Density Correction
Sandstone Neutron Por.

Density Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension
Bit Size







93°

1500

93°

1550

94°

1600

94°

1650

2300

95°

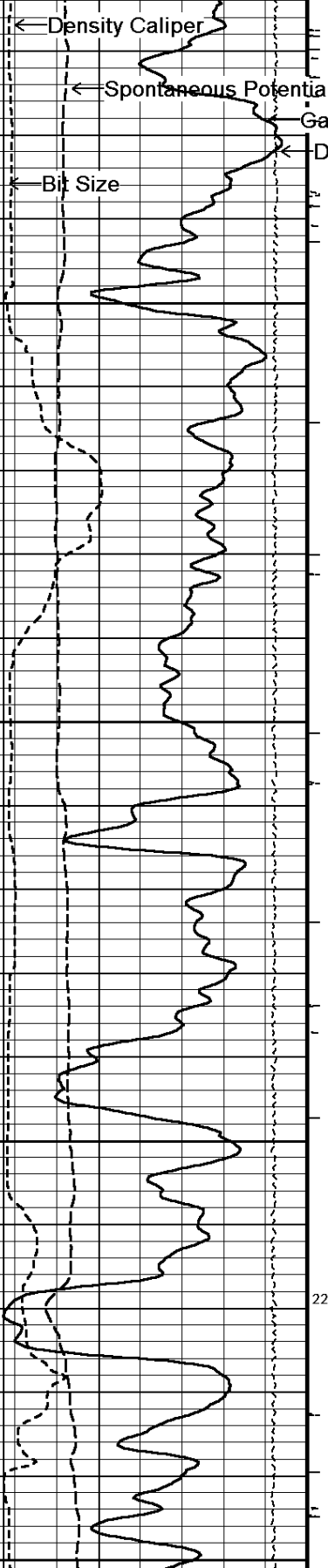
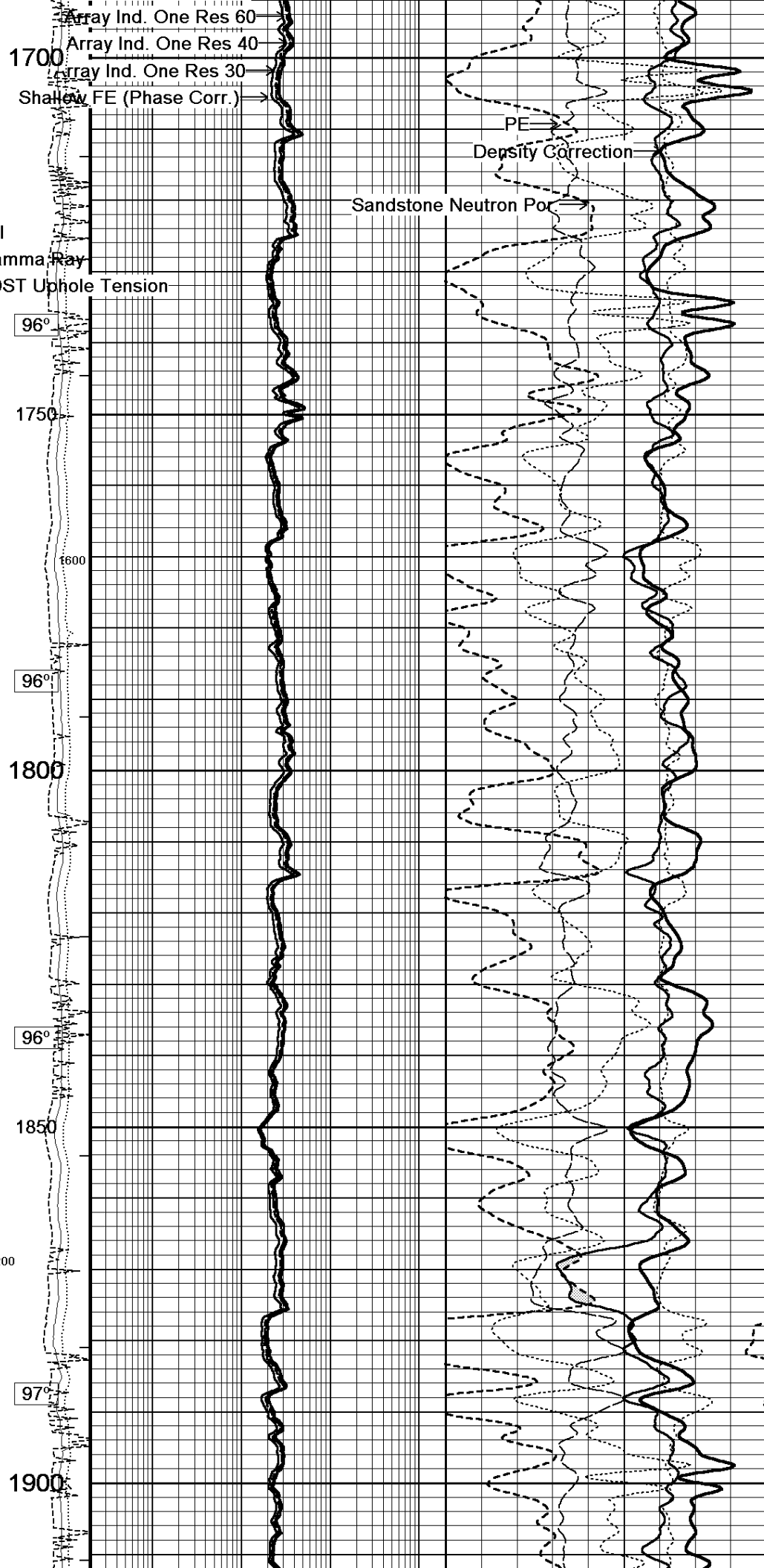
Sandstone Sonic Porosity →

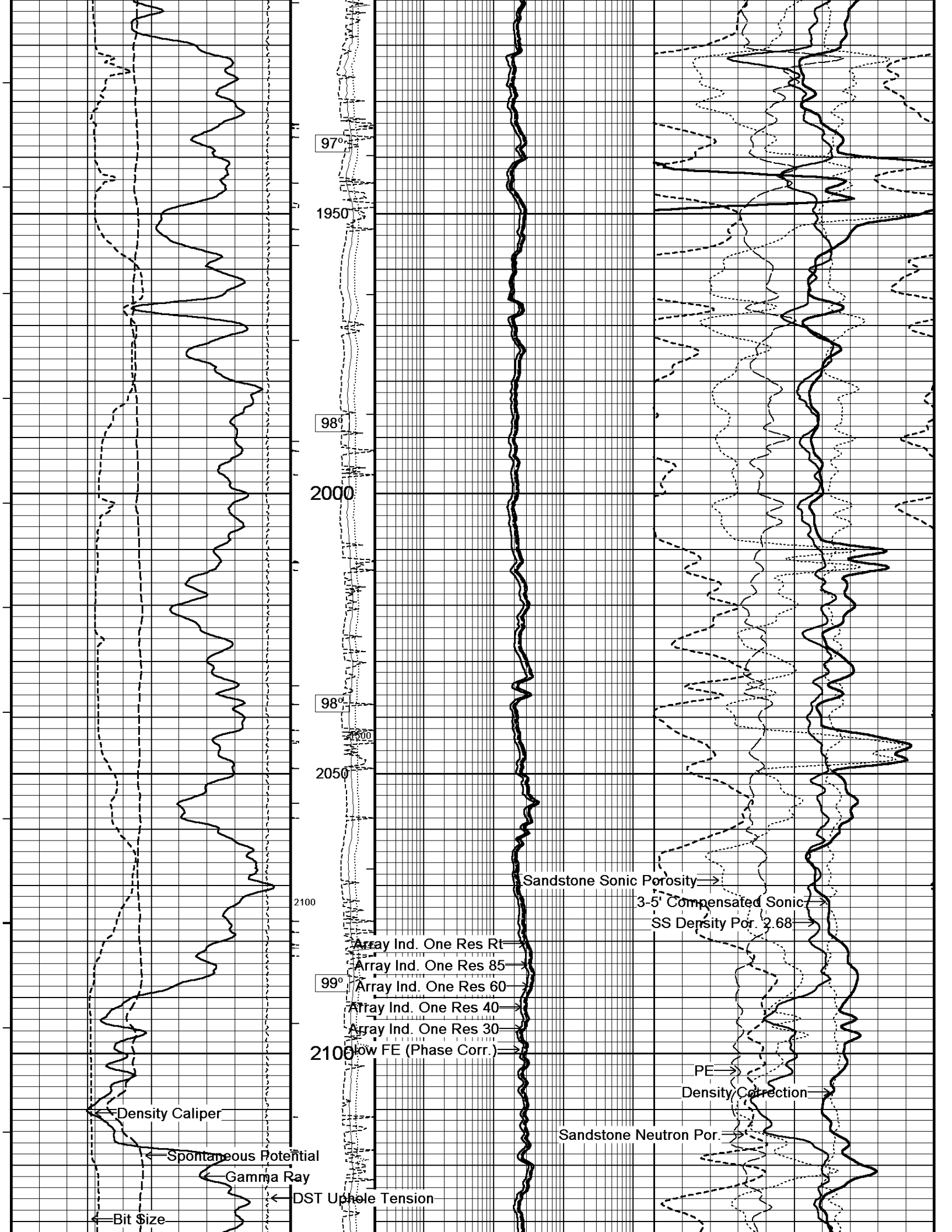
3-5' Compensated Sonic →

SS Density Per. 2.68 →

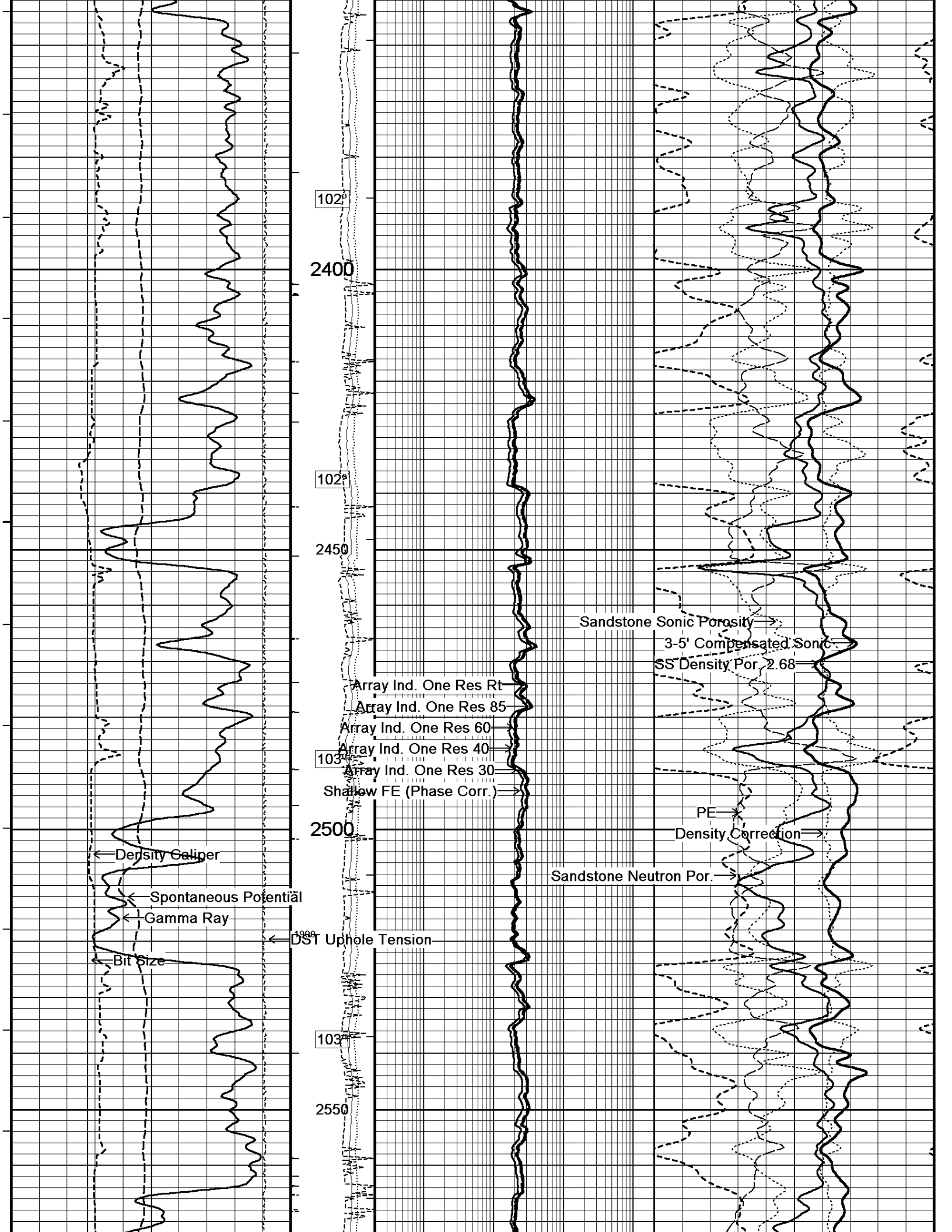
Array Ind. One Res Rt

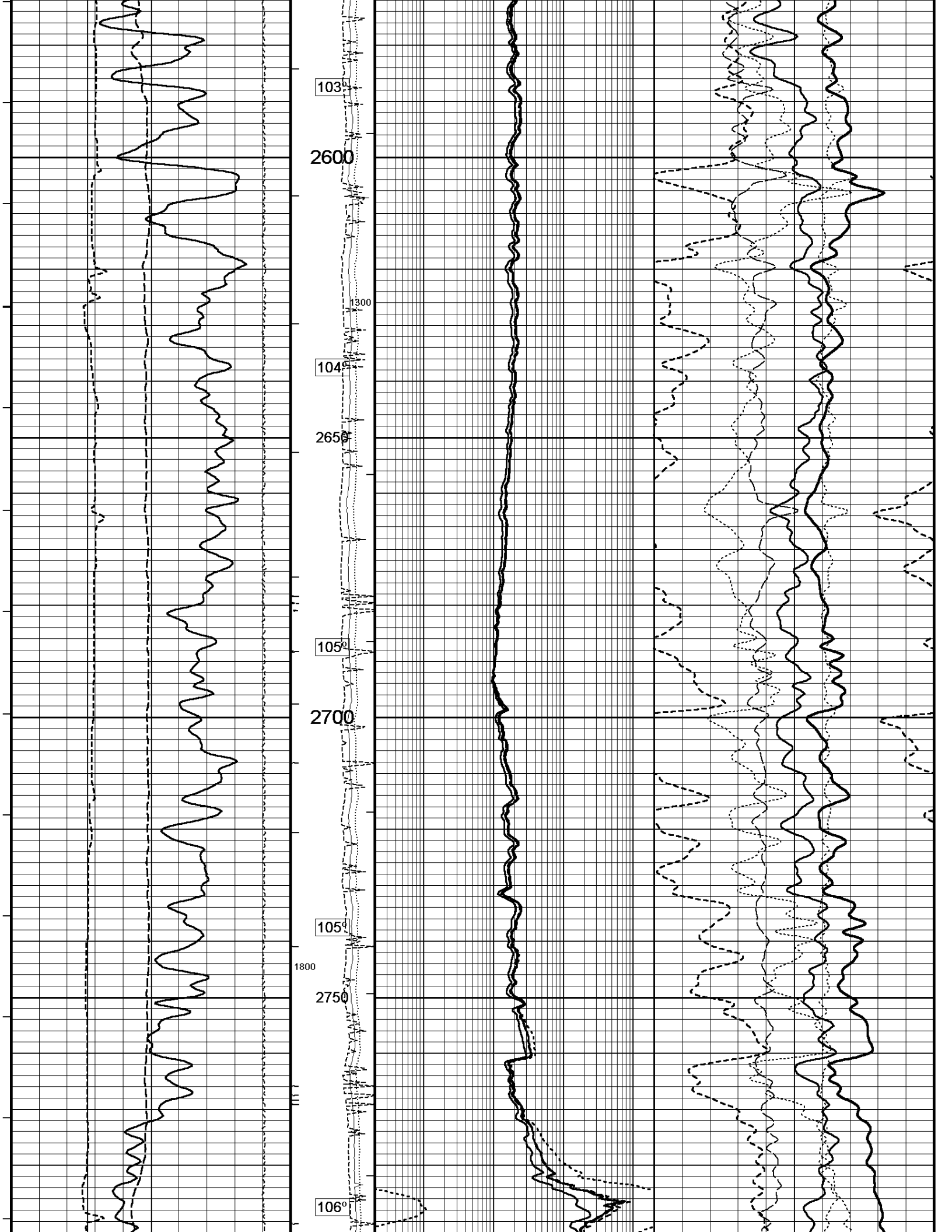
Array Ind. One Res 85

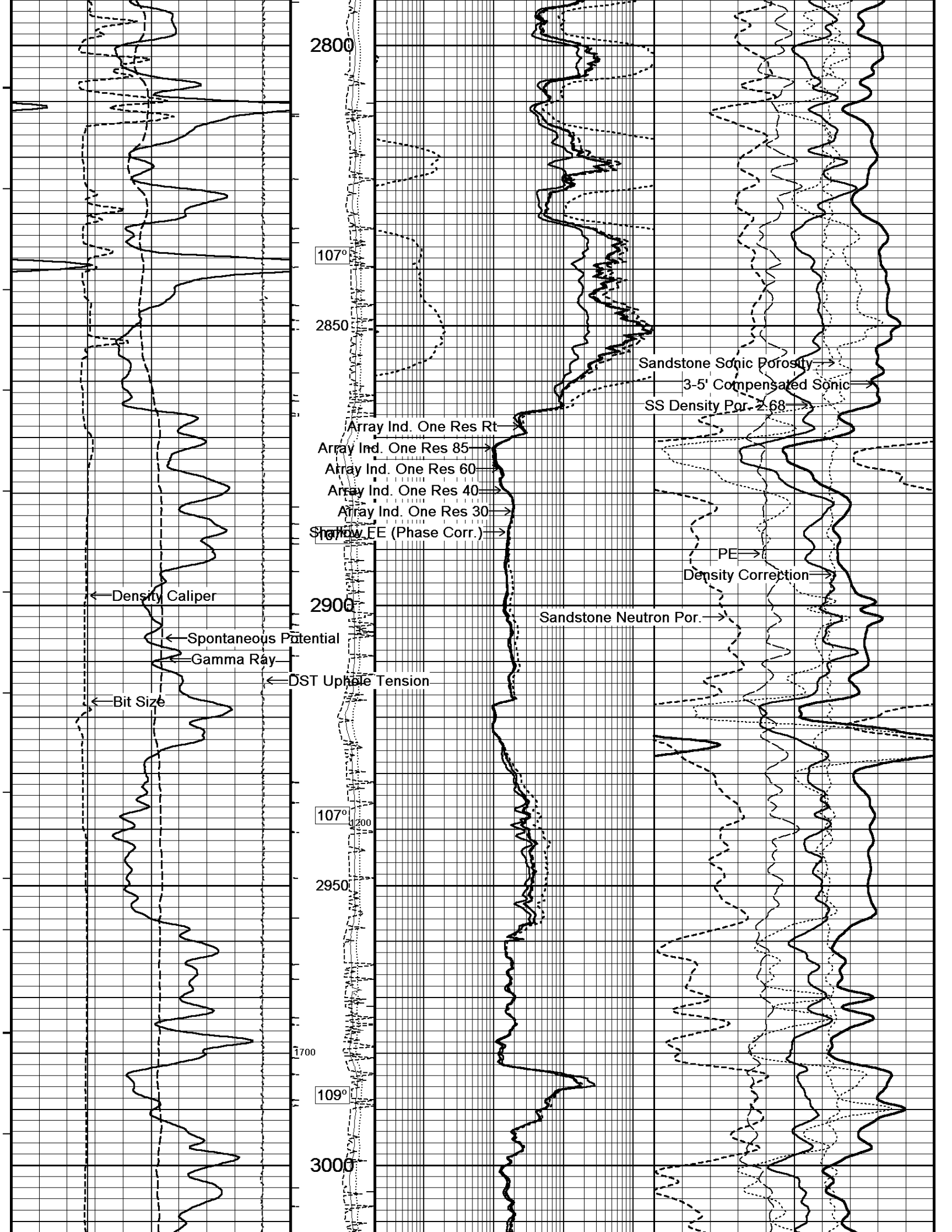


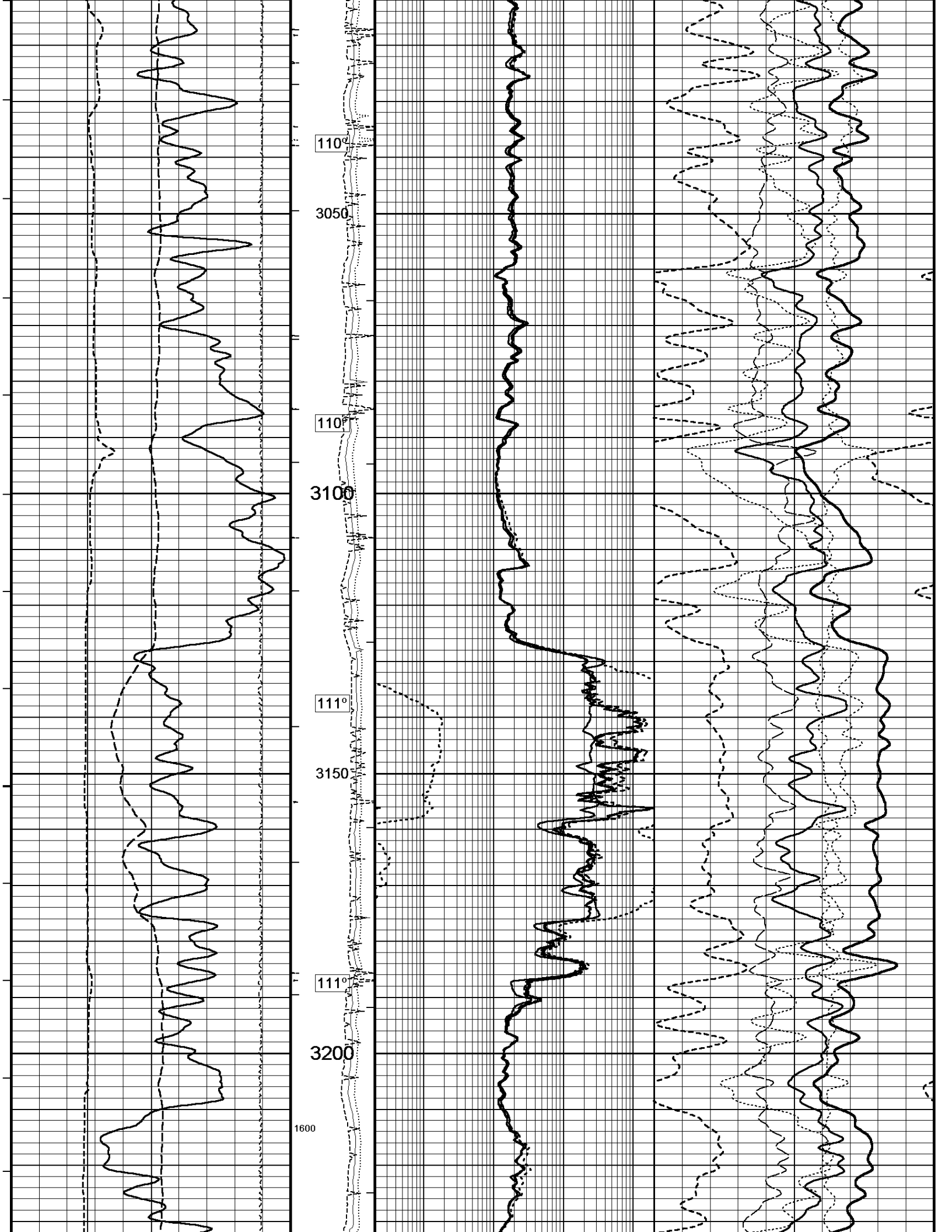


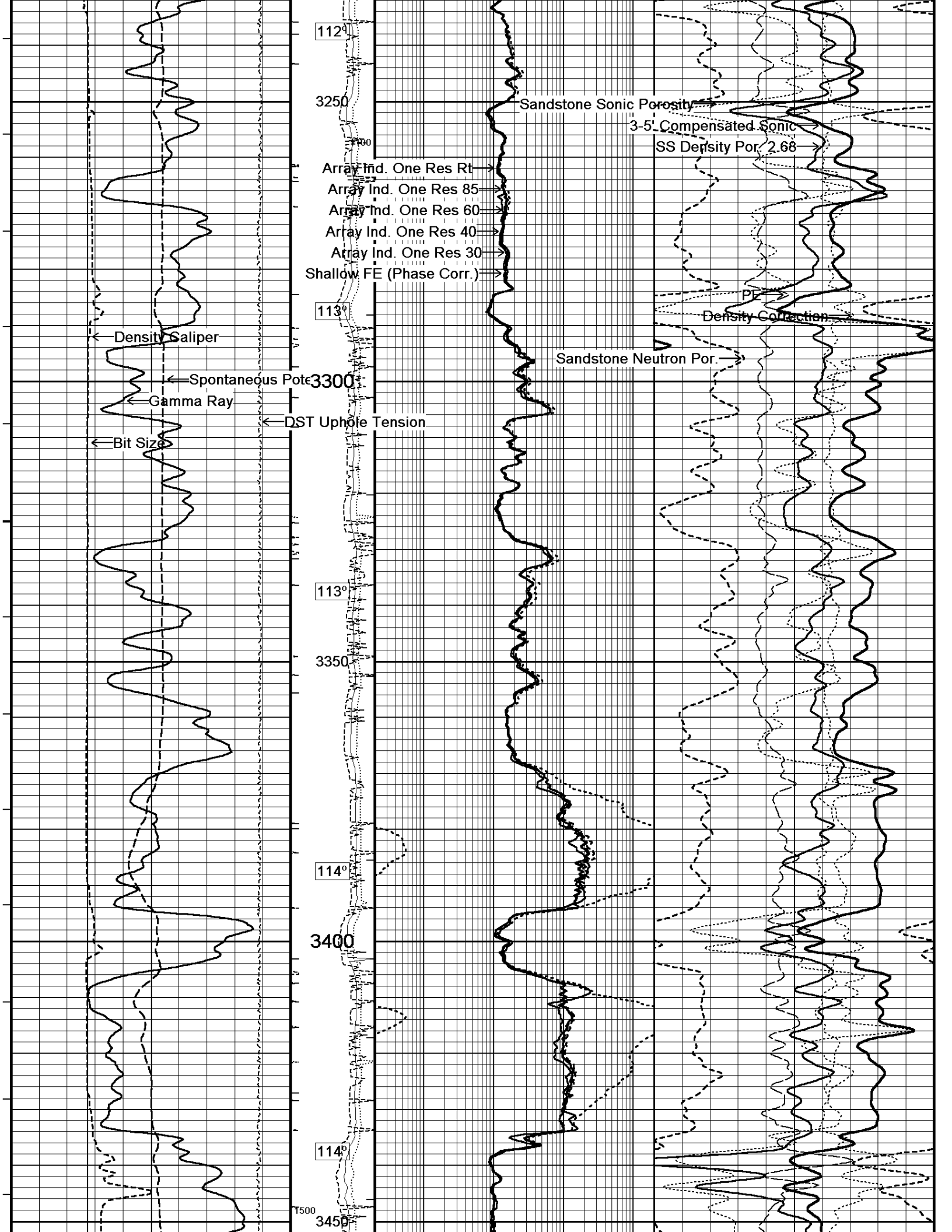


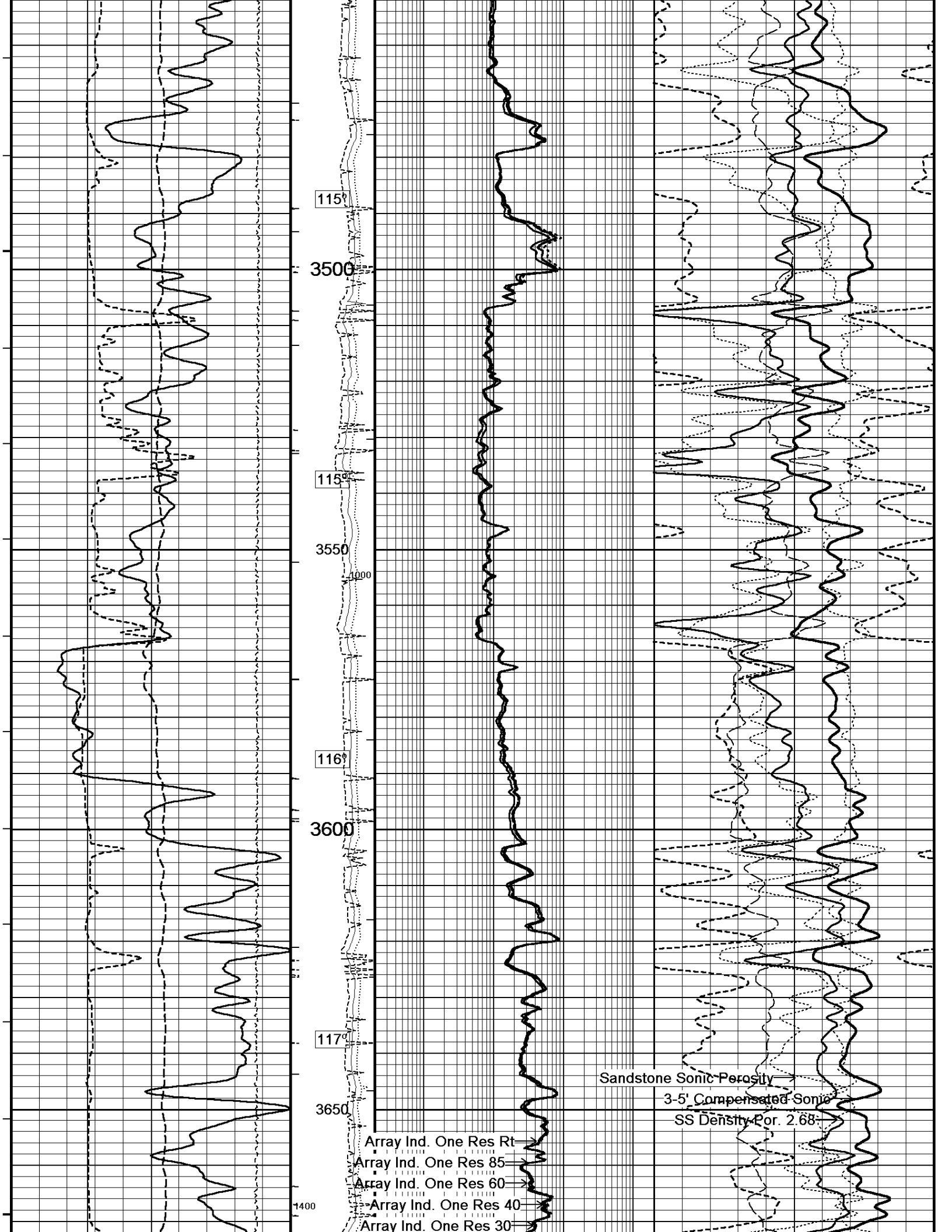












115'

3500

115'

3550

1000

116'

3600

117'

3650

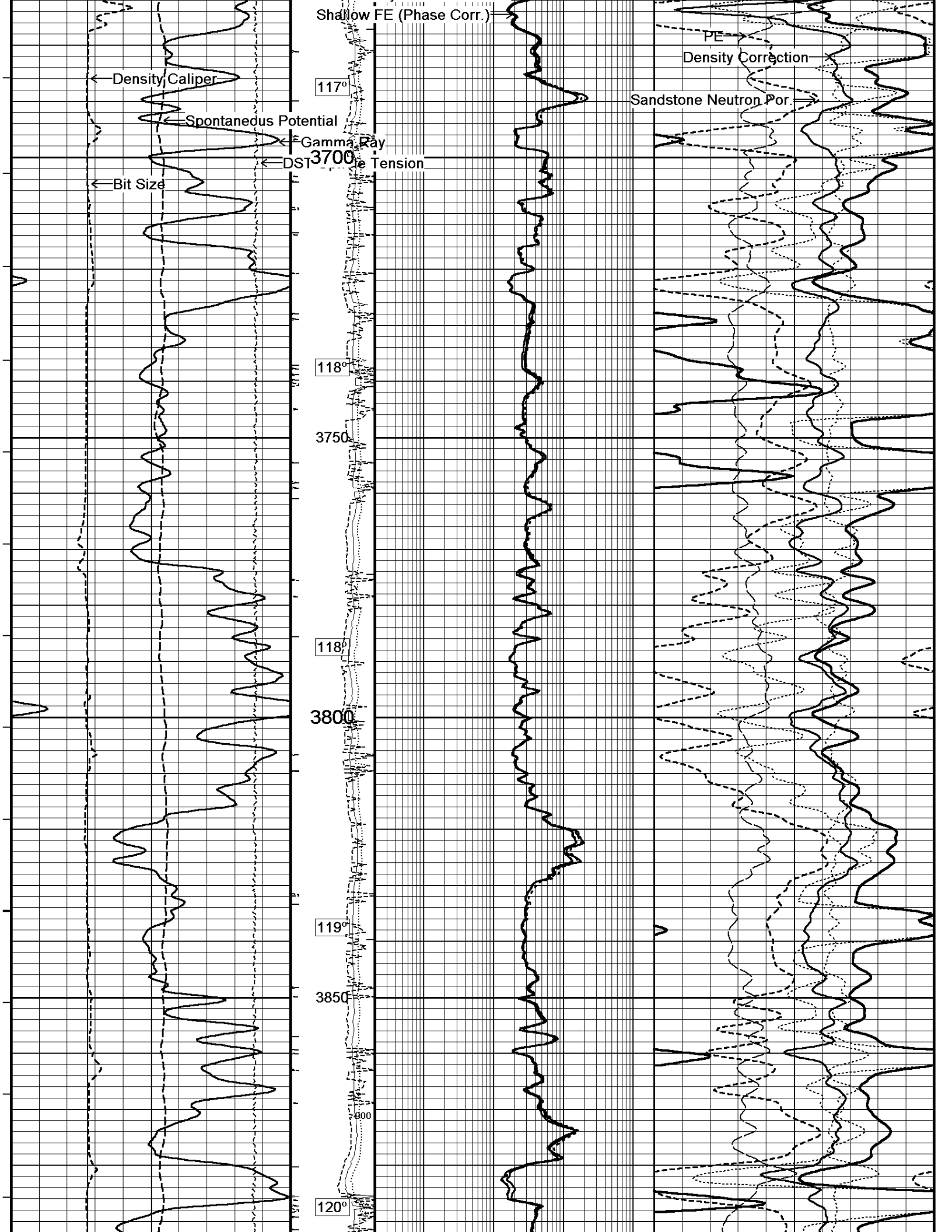
1400

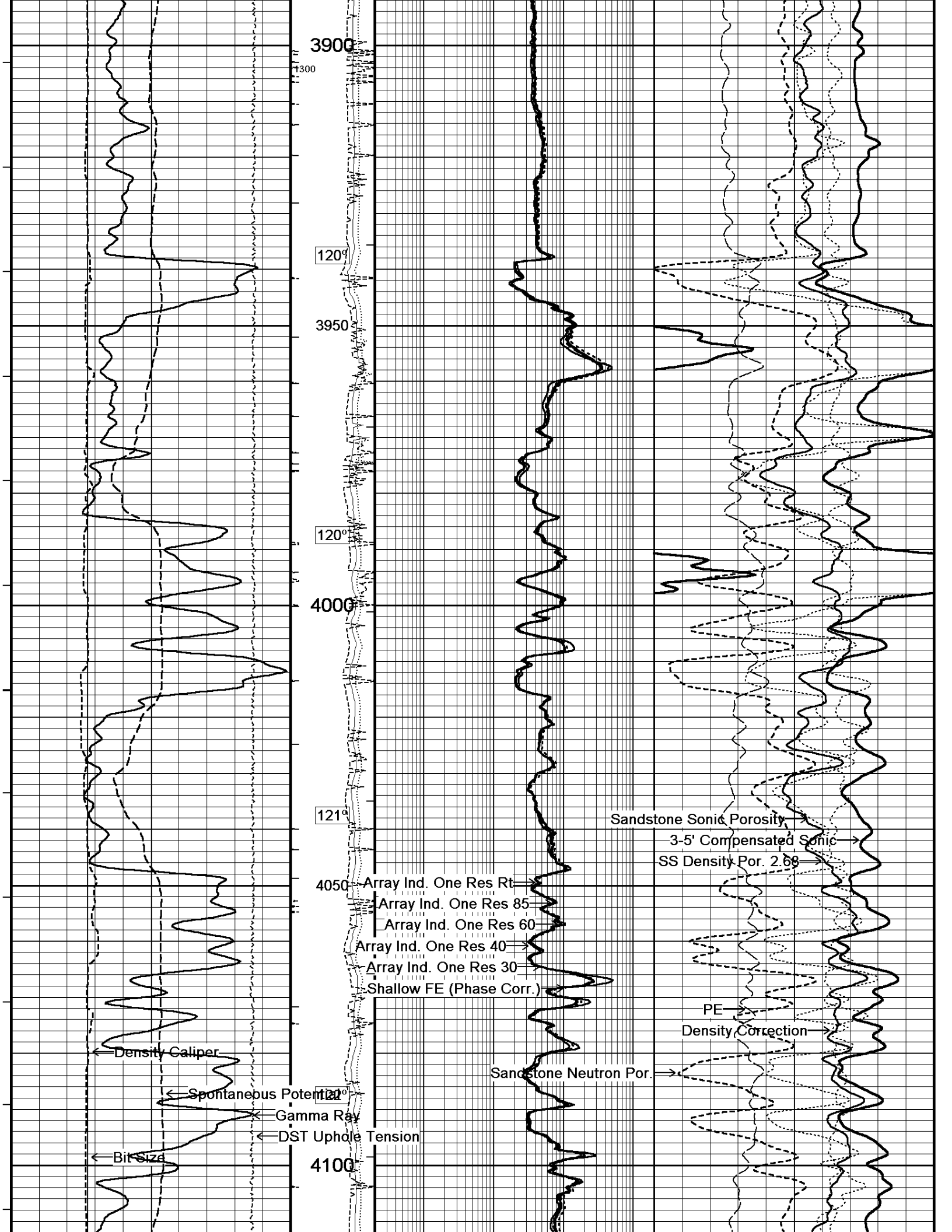
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Array Ind. One Res 40
Array Ind. One Res 30

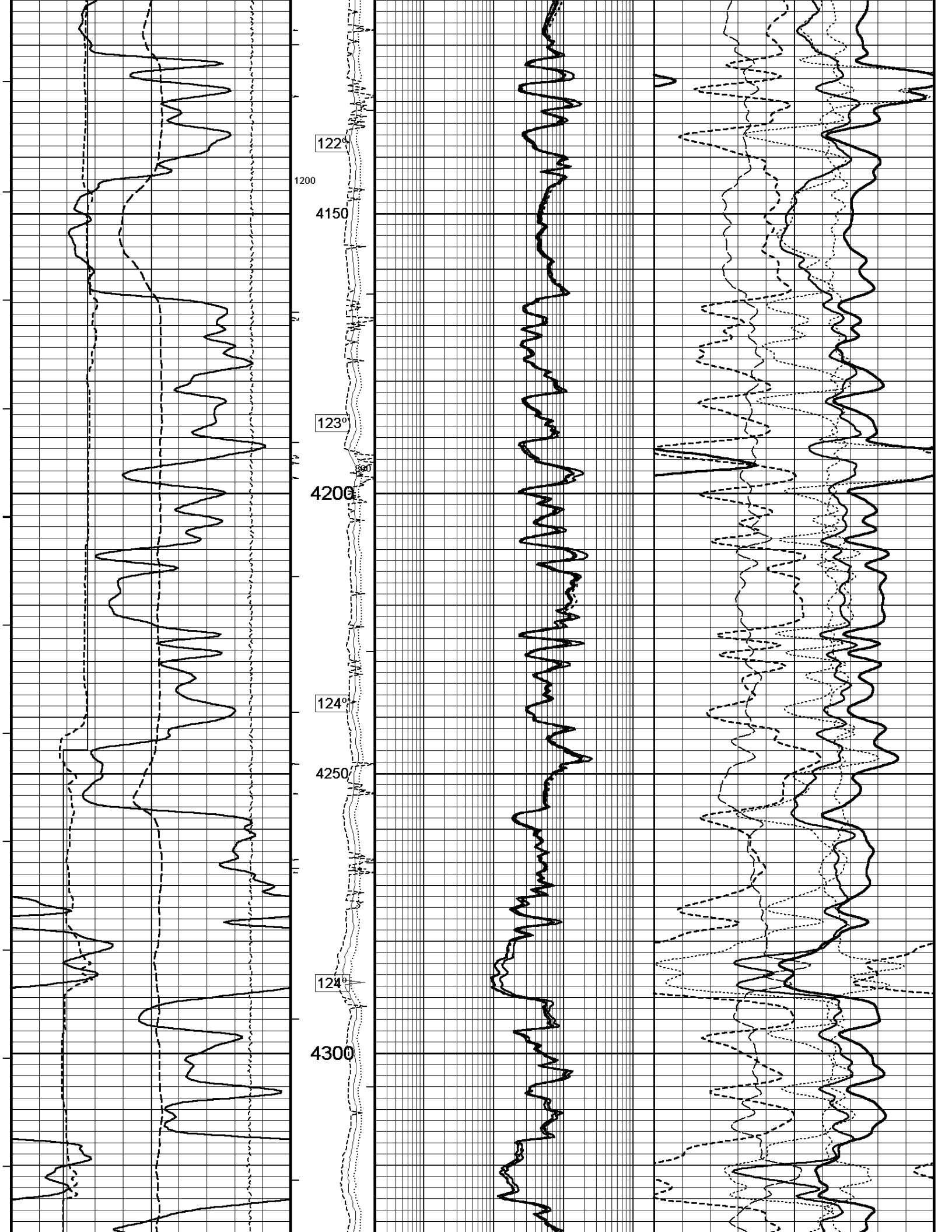
Sandstone Sonic Porosity

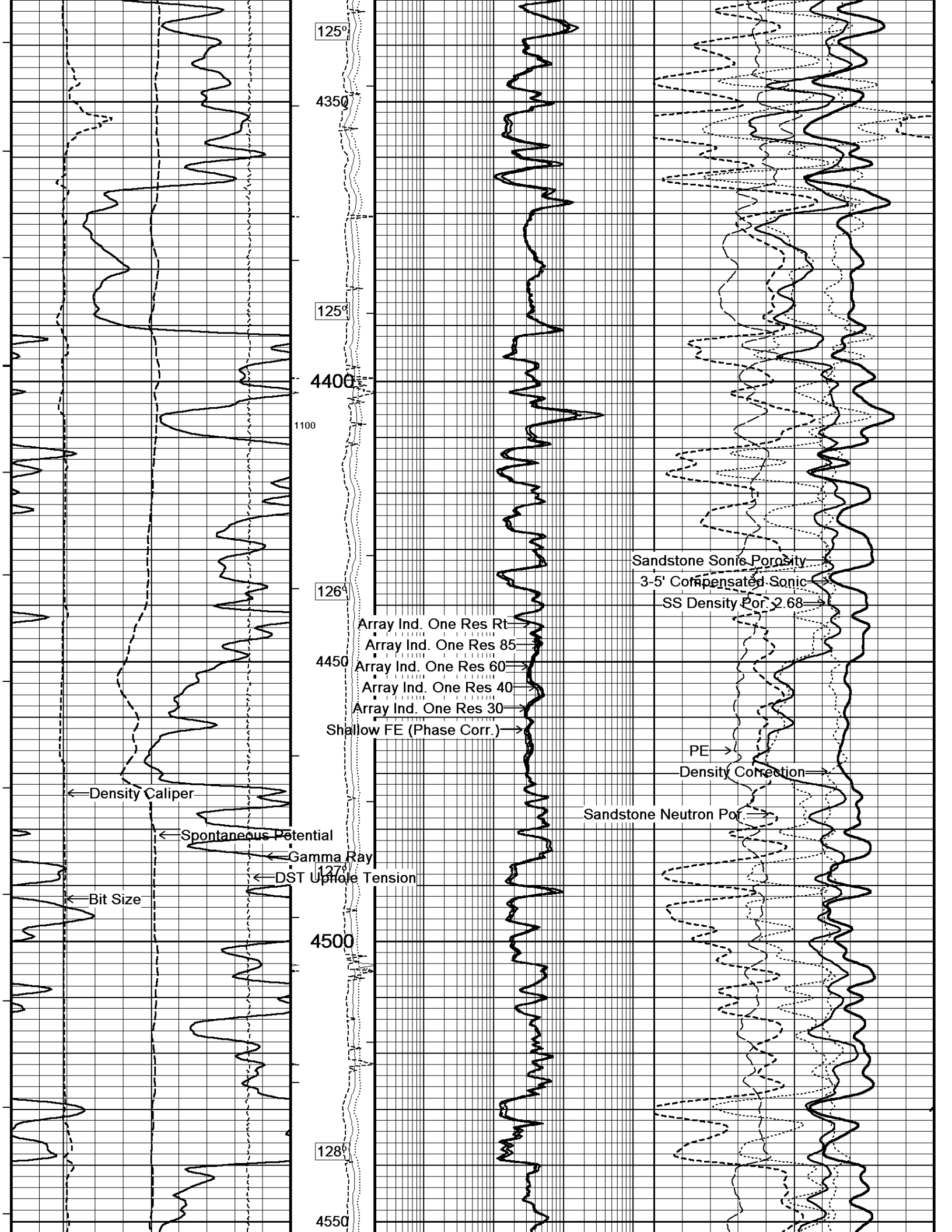
3-5' Compensated Sonic

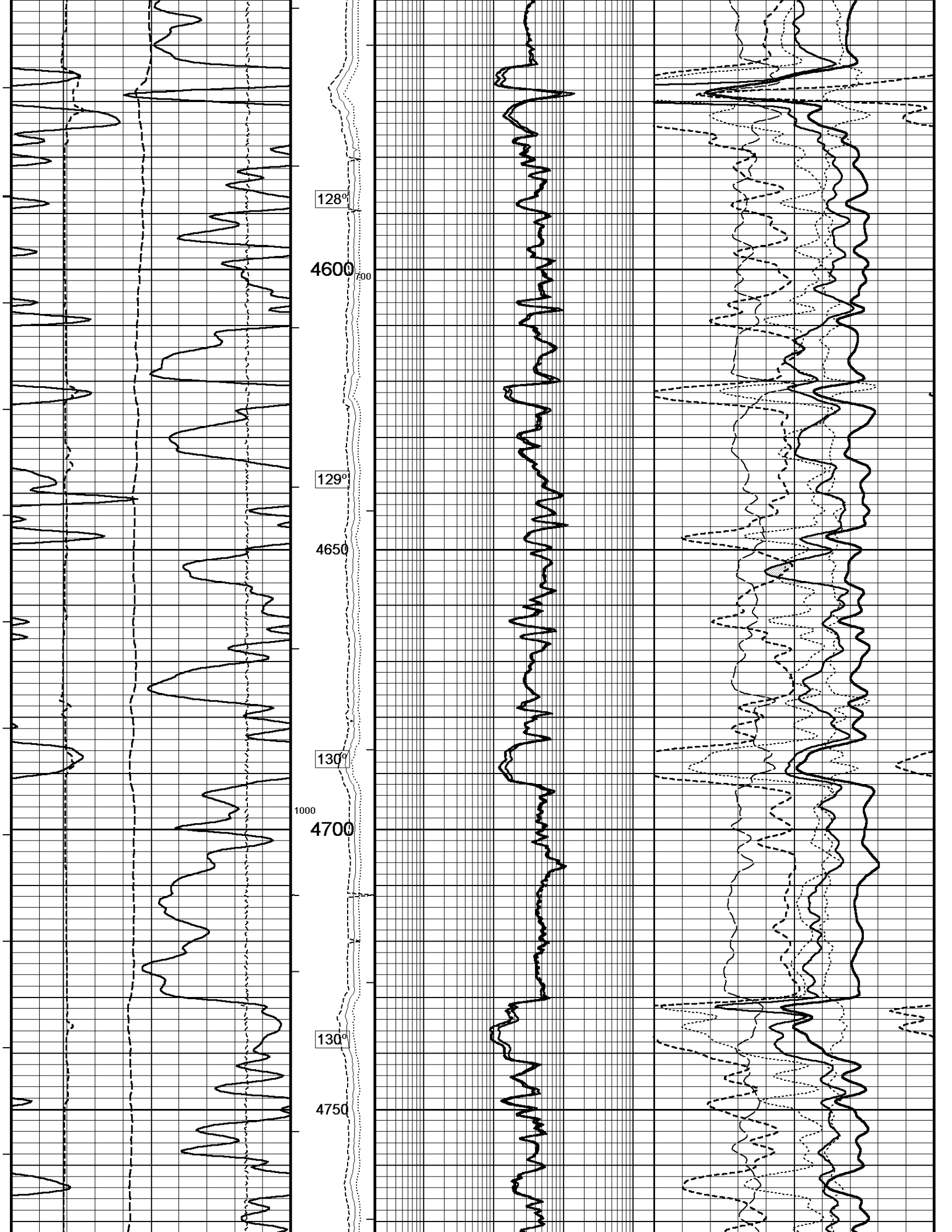
SS Density Por. 2.68

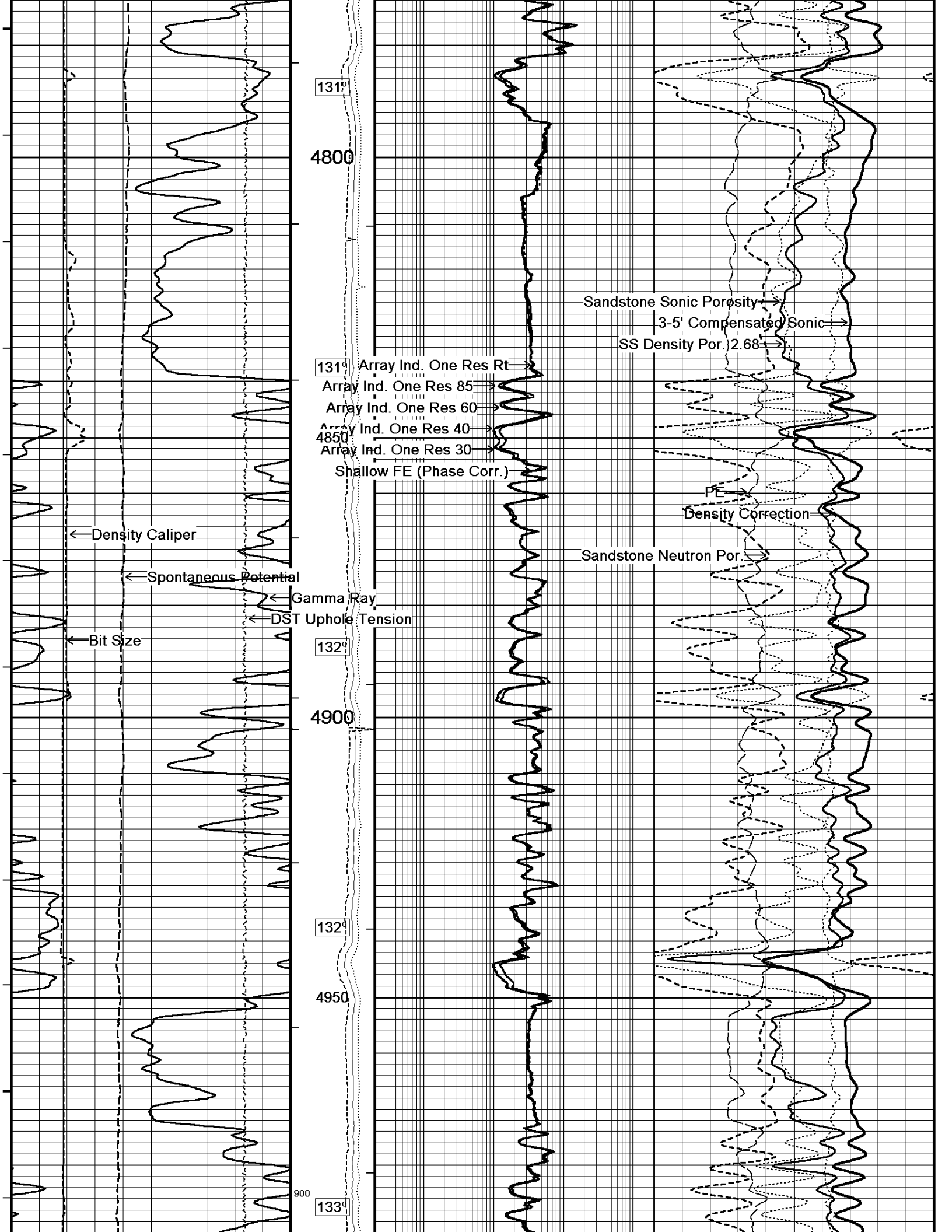












131°

4800

131°

4850

132°

4900

132°

4950

133°

Sandstone Sonic Porosity

3-5' Compensated Sonic

SS Density Por. (2.68)

Array Ind. One Res Rt

Array Ind. One Res 85

Array Ind. One Res 60

Array Ind. One Res 40

Array Ind. One Res 30

Shallow FE (Phase Corr.)

FE

Density Correction

Sandstone Neutron Por.

Density Caliper

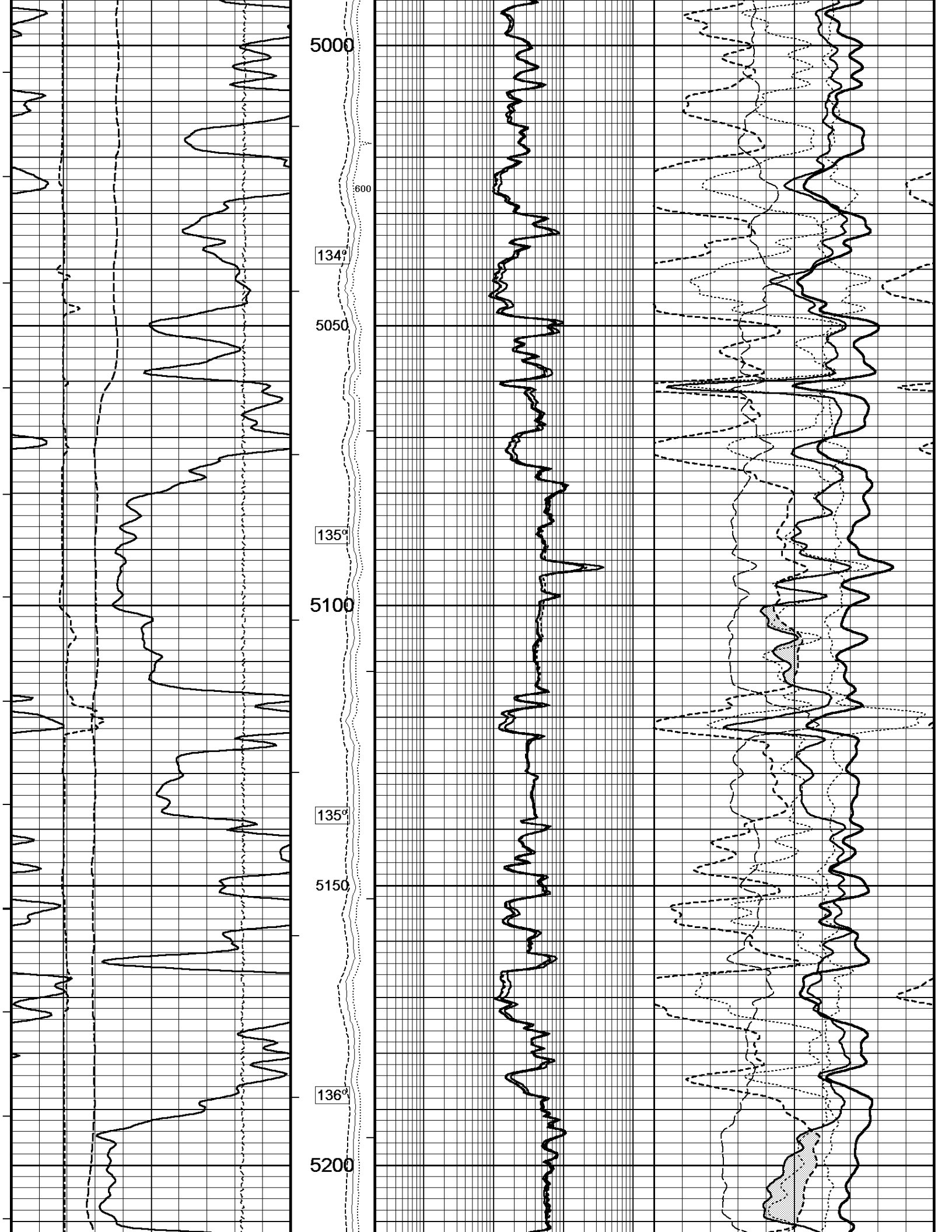
Spontaneous Potential

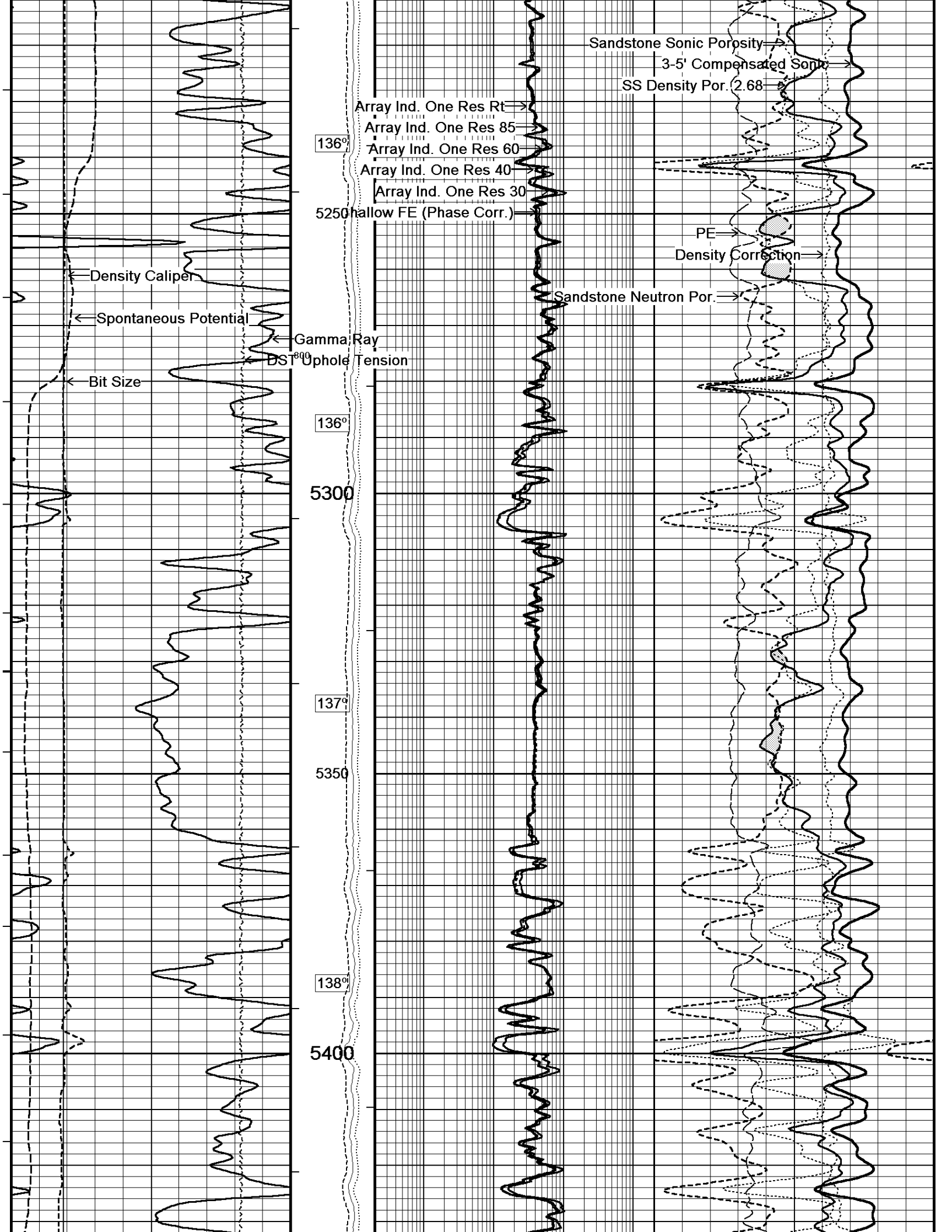
Gamma Ray

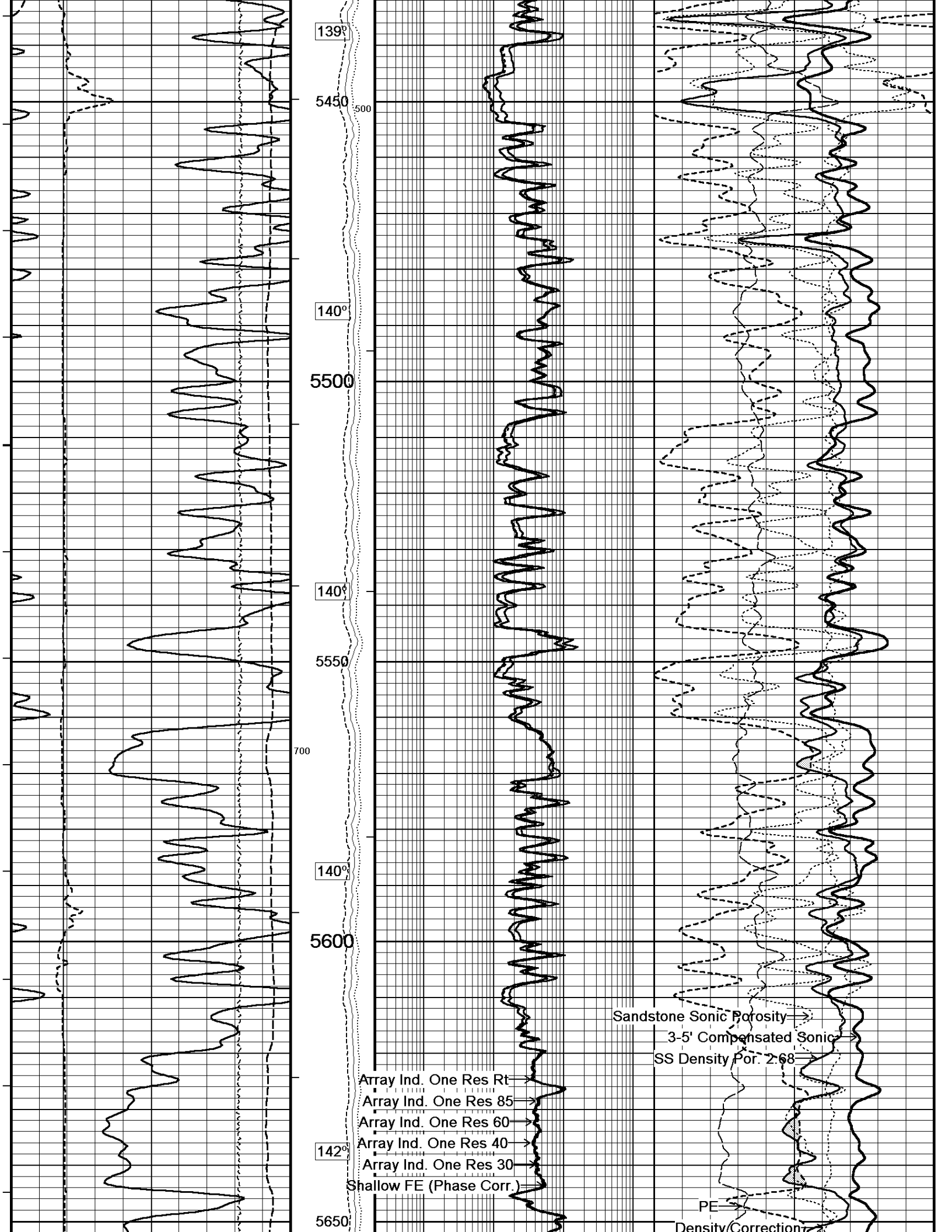
DST Uphole Tension

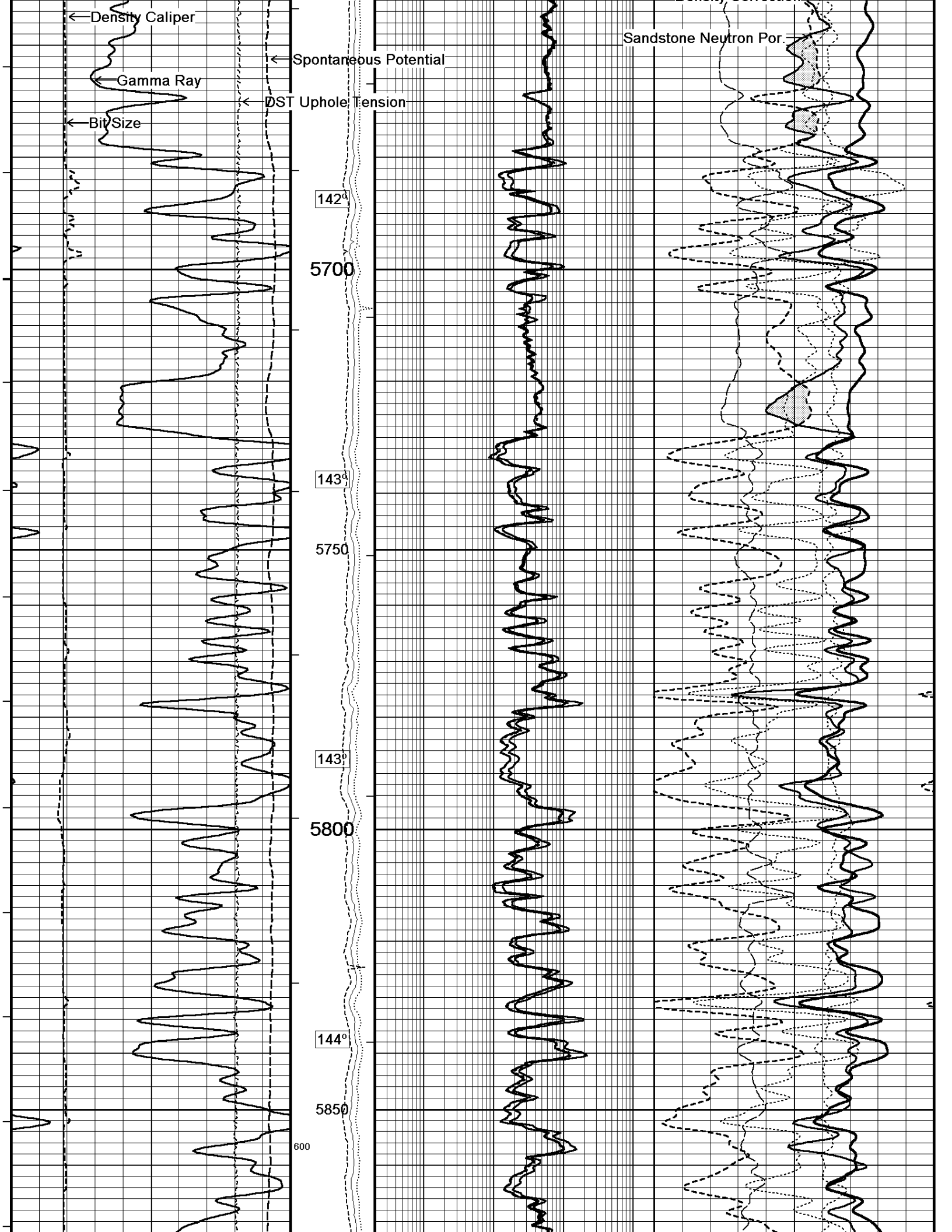
Bit Size

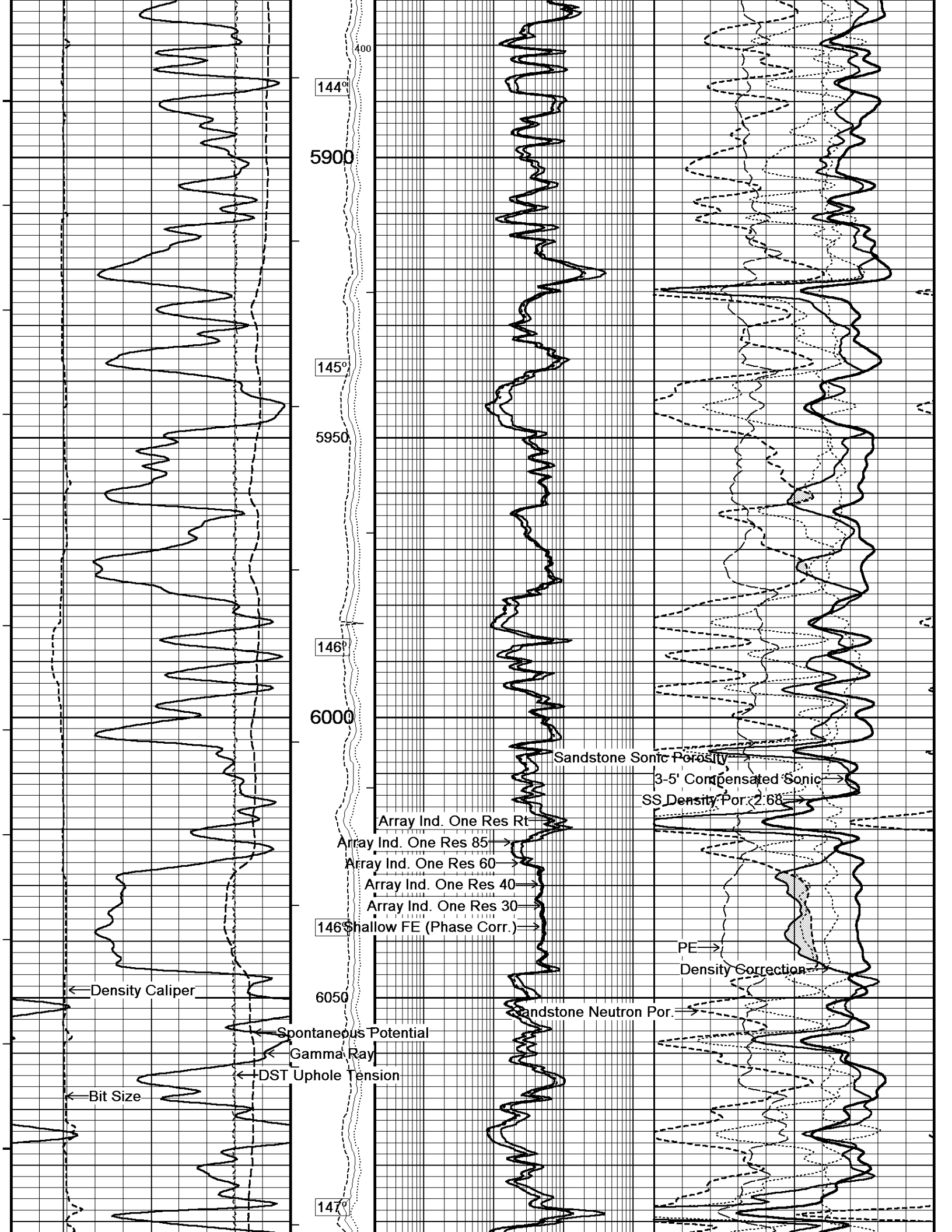
900

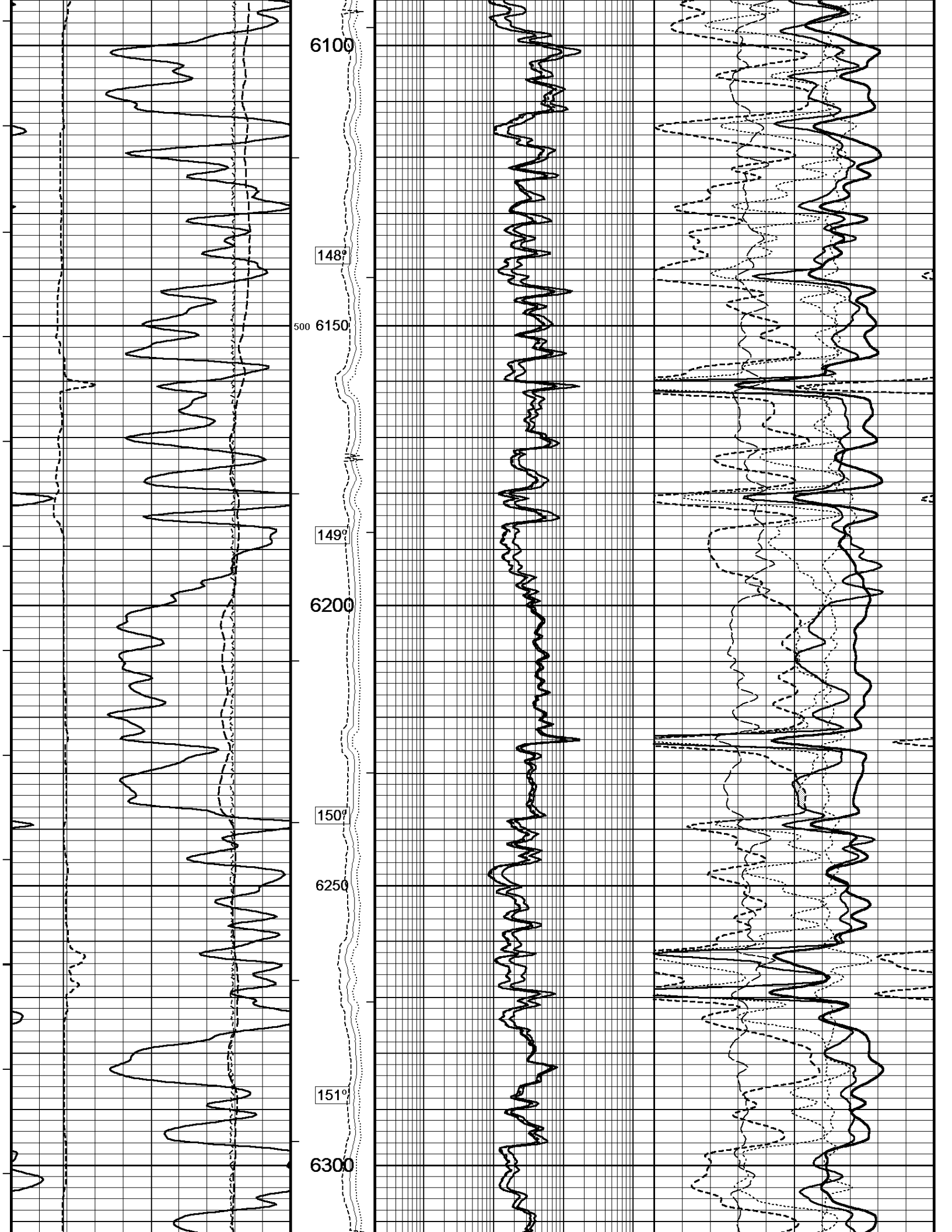


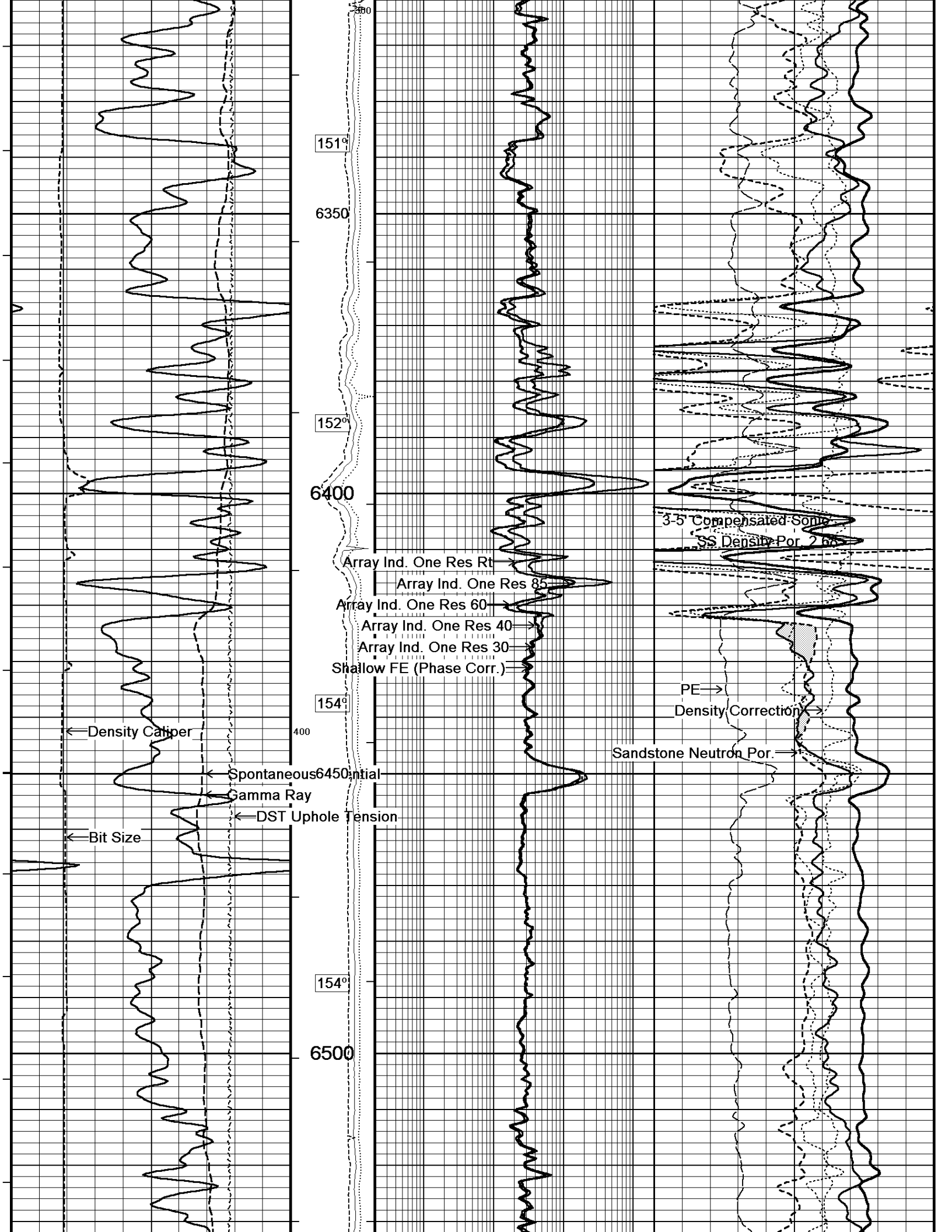


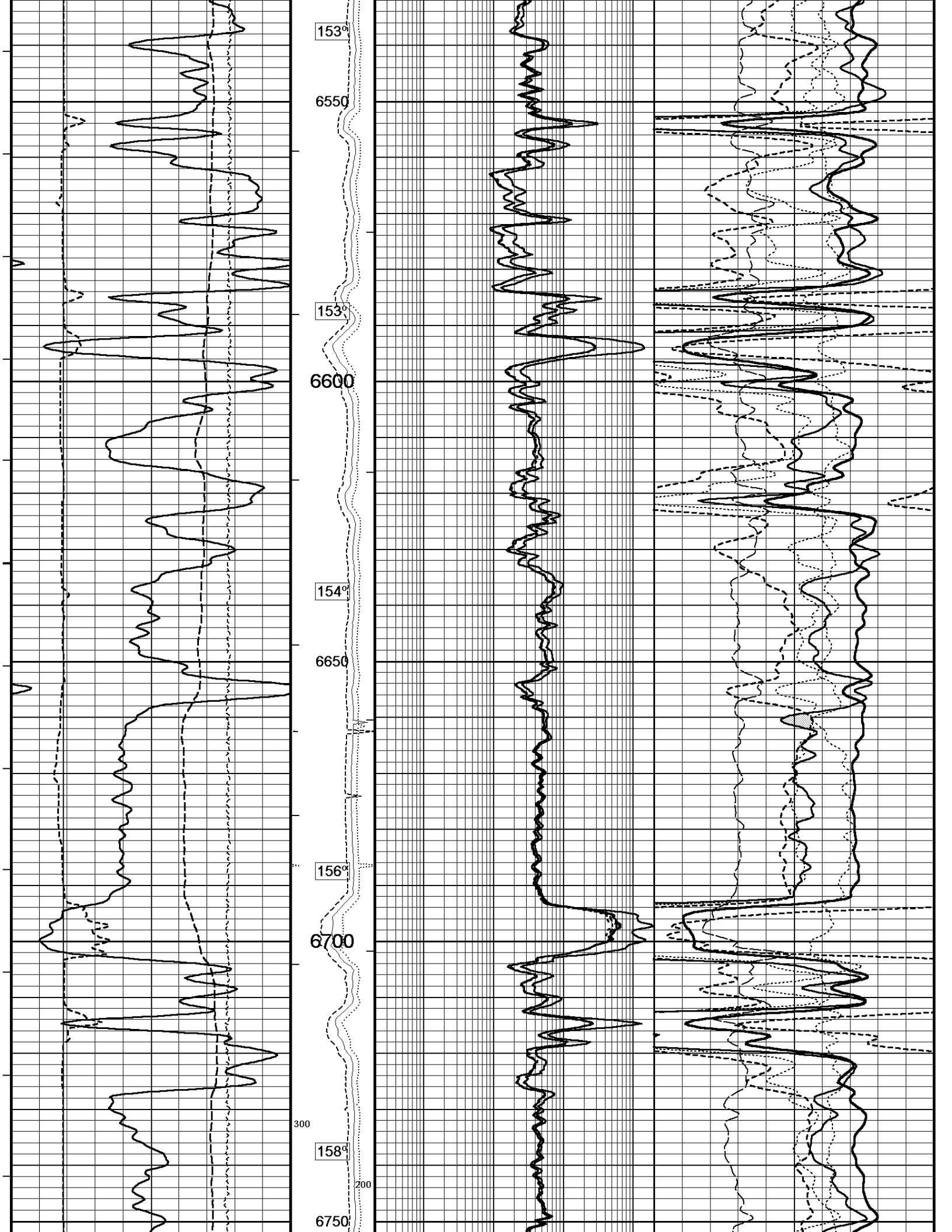


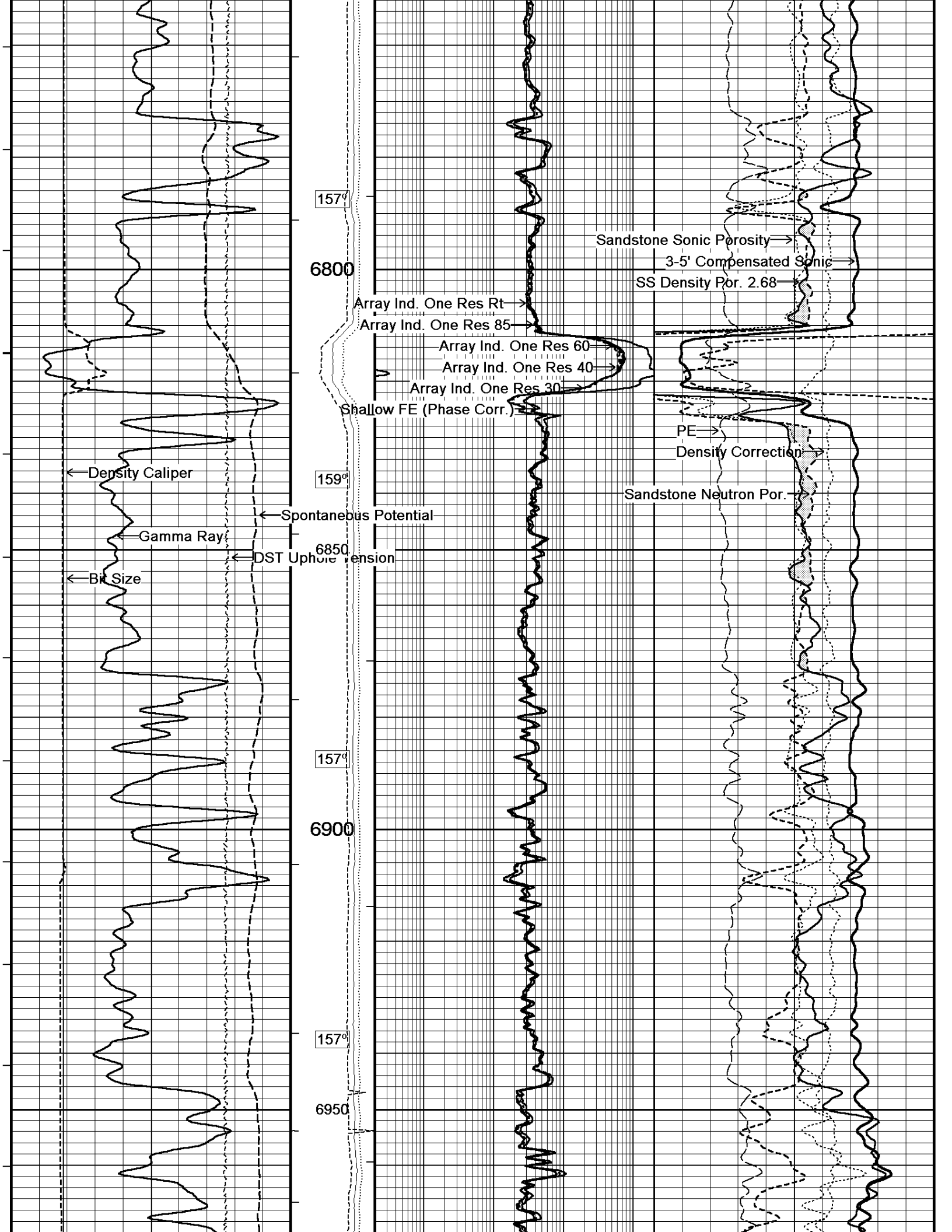


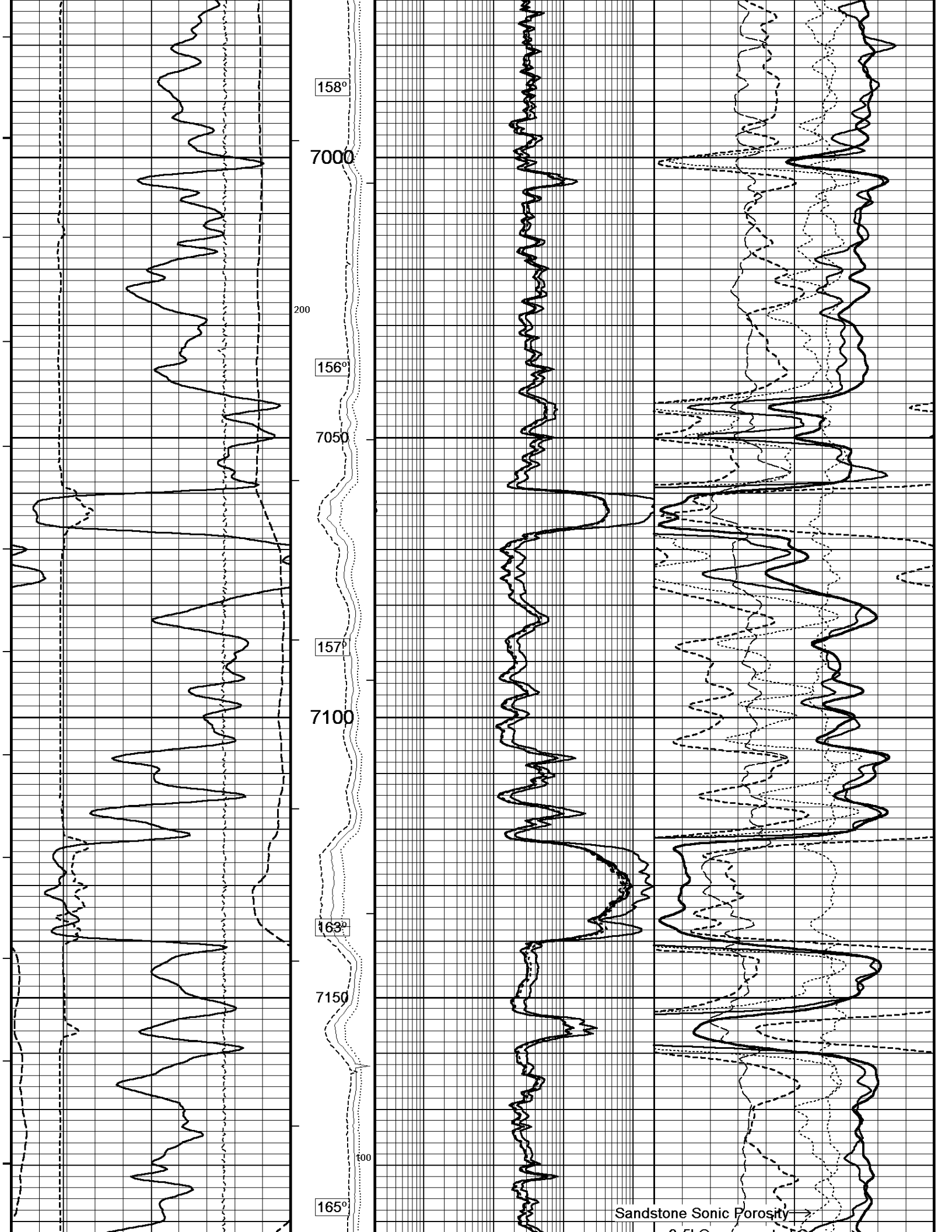












158°

7000

200

156°

7050

157°

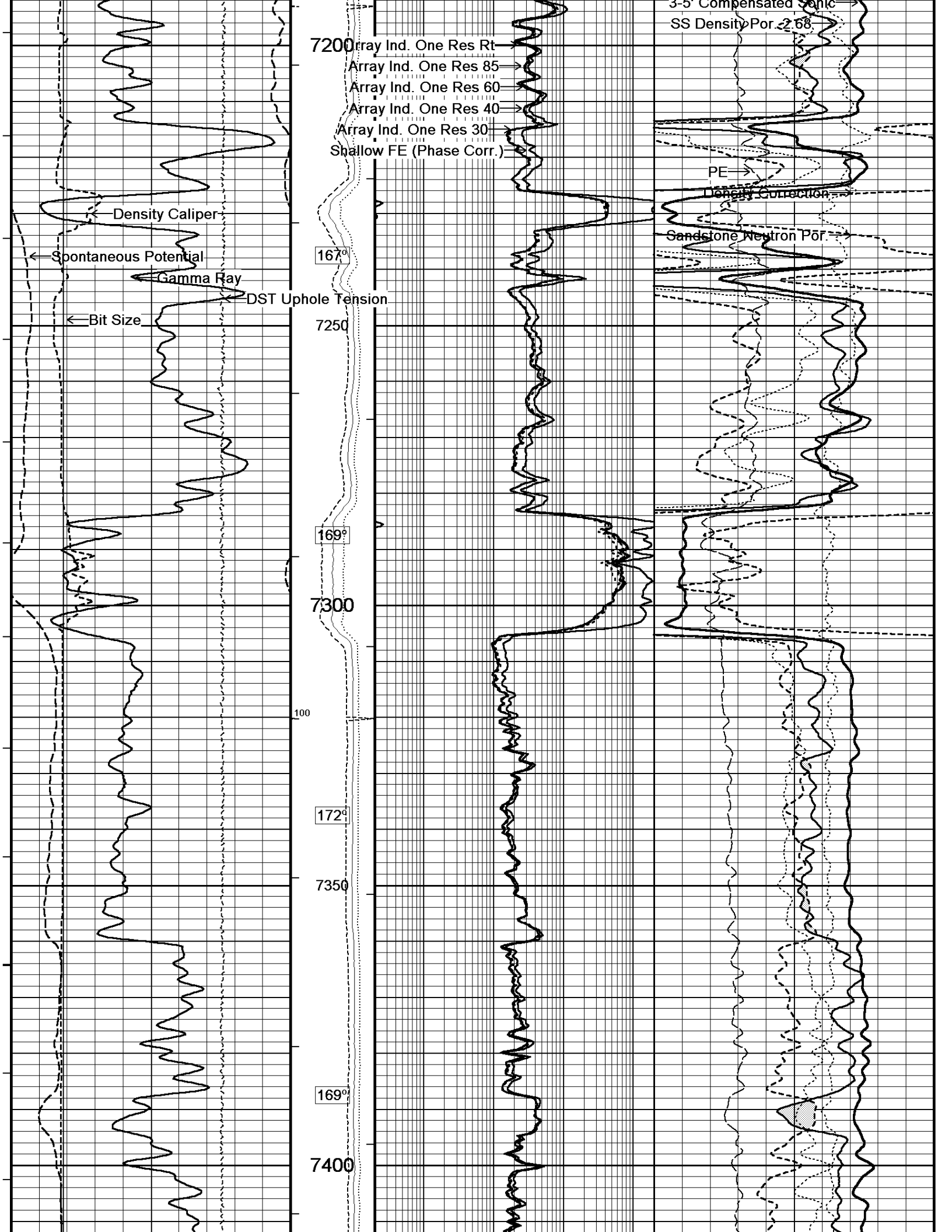
7100

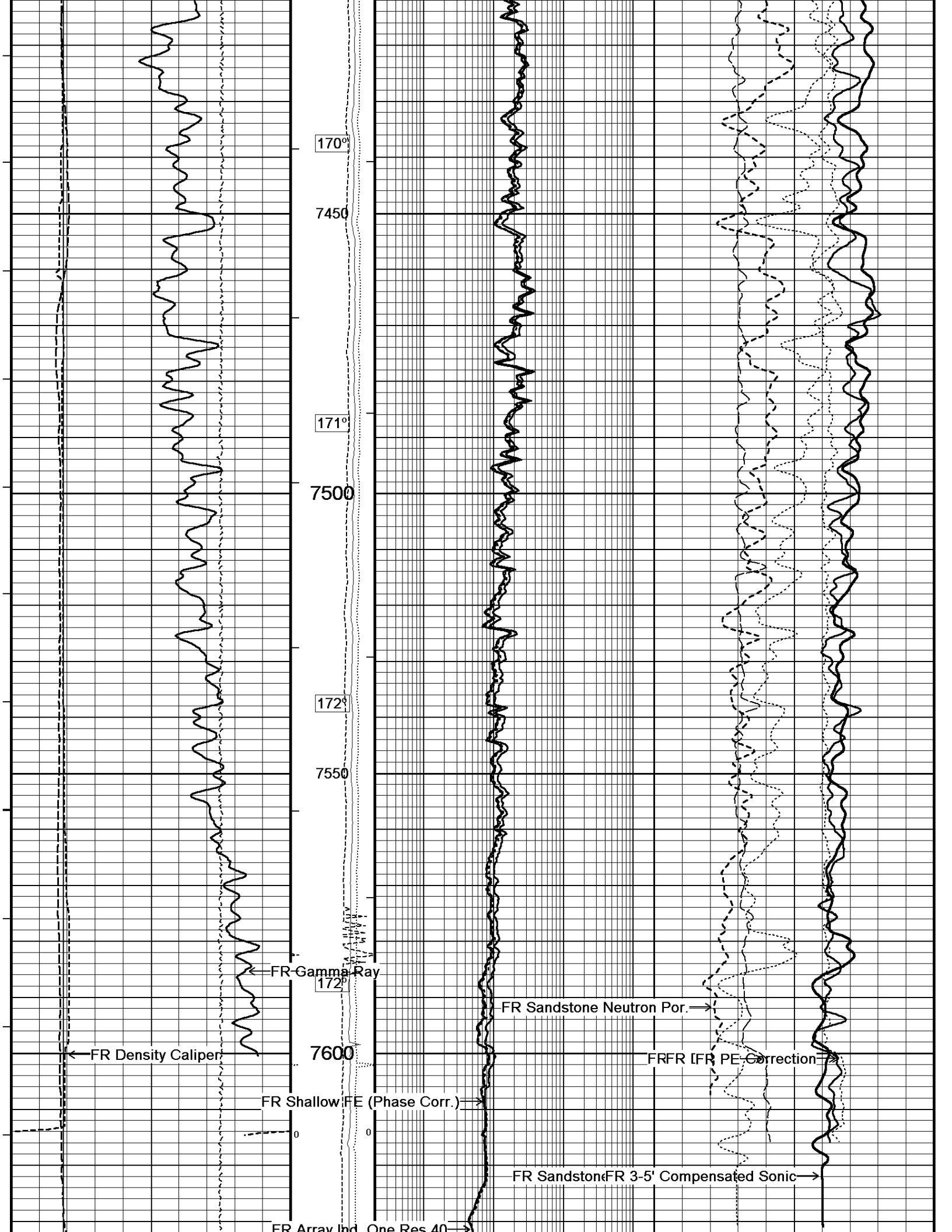
163°

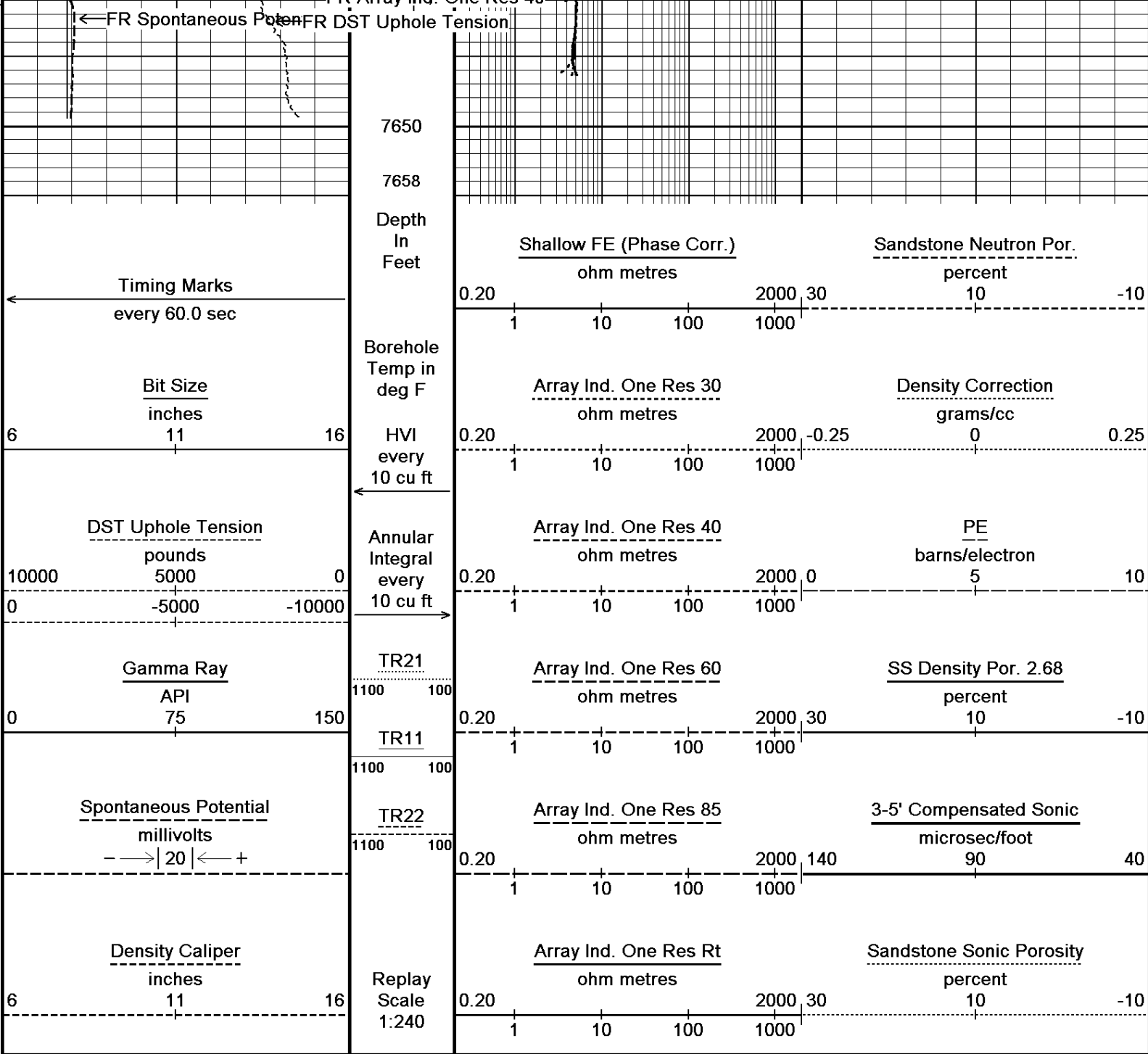
7150

165°

Sandstone Sonic Porosity →





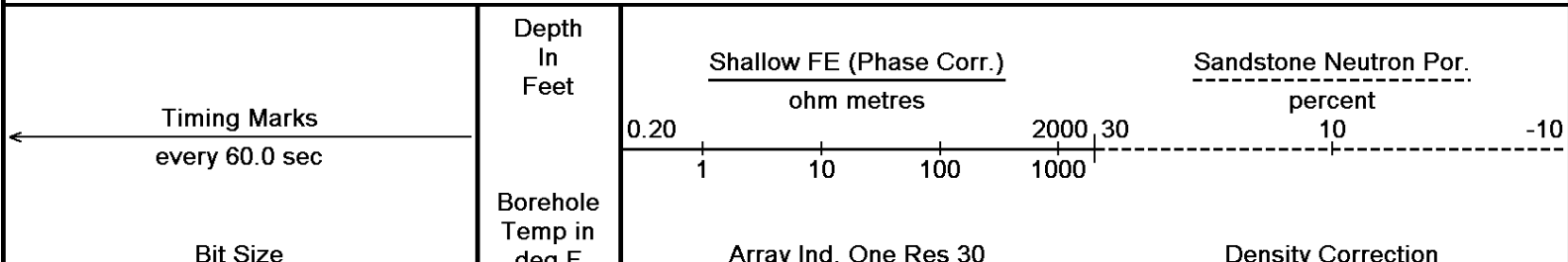


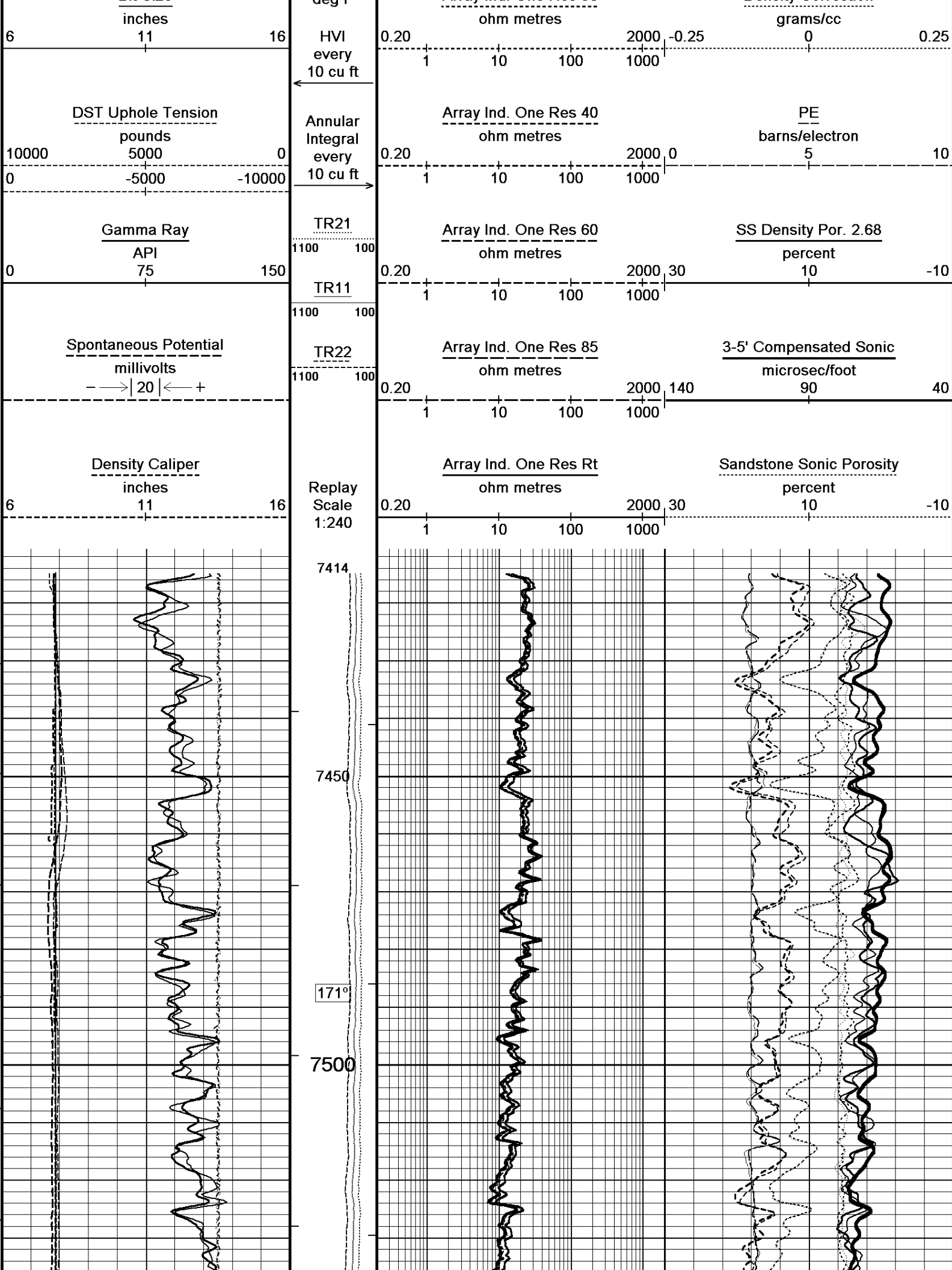
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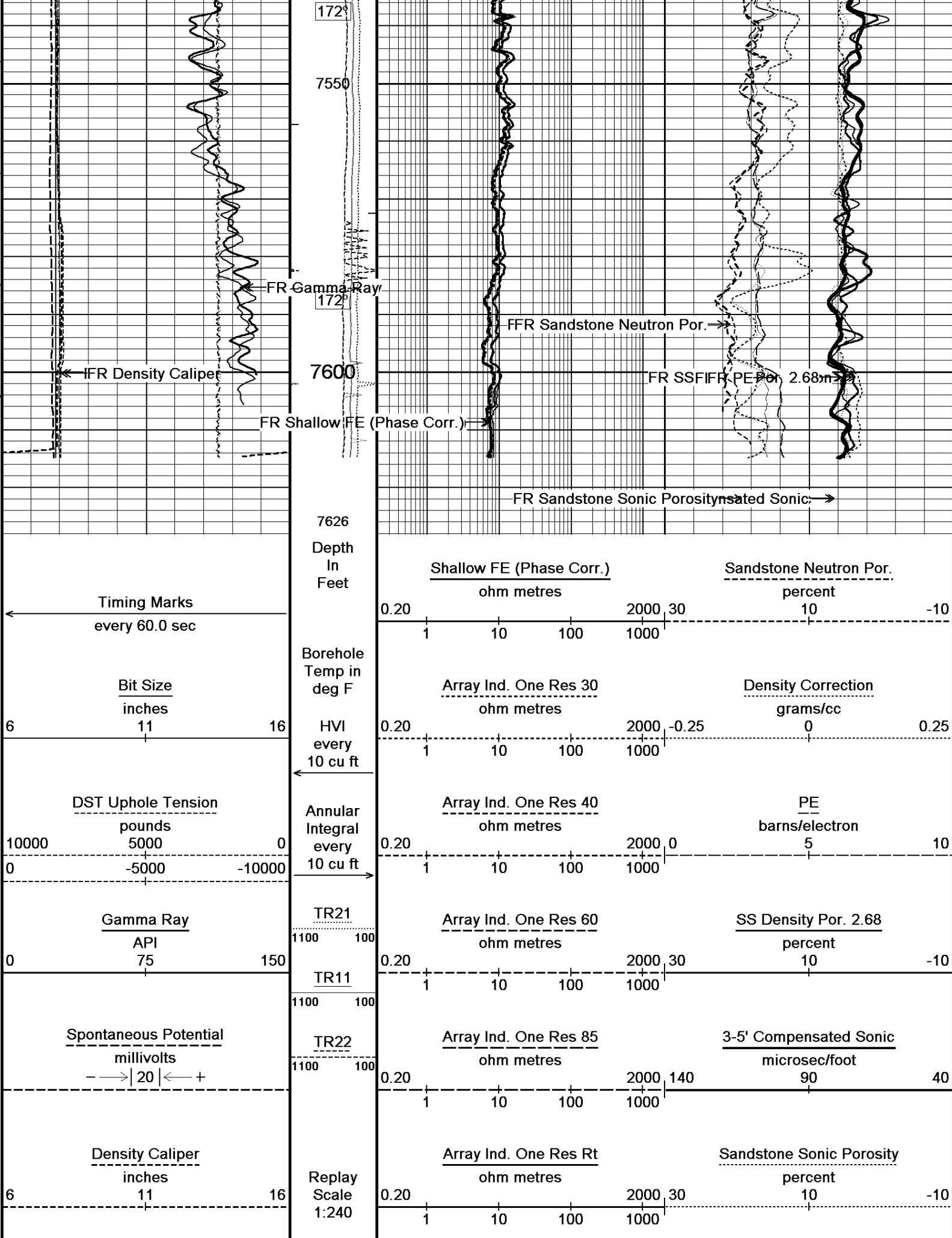
5 INCH MAIN LOG

OVERLAY

Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 13-DEC-2010 06:02
 Filename: C:\Minimus\LOGS\Bill Barrett\Miller Federal 24D-31-691\MAIN.dta
 Recorded on 13-DEC-2010 02:10
 Filename: C:\Minimus\LOGS\Bill Barrett\Miller Federal 24D-31-691\REPEAT2.dta
 Recorded on 12-DEC-2010 20:52
 System Versions: Logged with 10.08.1568 Plotted with 10.08.1568







BEFORE SURVEY CALIBRATION

C:\Minimus\LOGS\Bill Barrett\Miller Federal 24D-31-691\MAIN.dta

General Constants All 000 Last Edited on 12-DEC-2010,18:51

General Parameters

Mud Resistivity	1.800	ohm-metres
Mud Resistivity Temperature	80.000	degrees F
Water Level	0.000	feet
Density/Neutron Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Method	Single Caliper	
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	4.500	inches
Caliper for Differential Caliper	None	

Rwa Parameters

Porosity used	Base Density Porosity
Resistivity used	Deep Induction
RWA Constant A	0.610
RWA Constant M	2.150

Down-hole Tension Calibration SMS 000 Field Calibration on 12-DEC-2010 19:13

Reading No	Measured	Calibrated (lbs)
1	15244.42	0.00
2	17442.20	450.00

High Resolution Temperature Calibration MCG 287 Field Calibration on 07-DEC-2010,21:25

	Measured	Calibrated(Deg F)
Lower	10.00	10.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG 287 Last Edited on 27-OCT-2010,11:54

Pre-filter Length	11
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SP Calibration MCG 287 Field Calibration on 07-DEC-2010,21:25

	Measured	Calibrated (mV)
Reference 1	95.0	104.2
Reference 2	-87.4	-104.5

Gamma Calibration MCG 287 Field Calibration on 12-DEC-2010,18:47

	Measured	Calibrated (API)
Background	131	86
Calibrator (Gross)	928	613
Calibrator (Net)	797	527

Gamma Constants MCG 287 Last Edited on 25-NOV-2010,00:52

Gamma Calibrator Number	GRC-174	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN 306 Base Calibration on 02-DEC-2010 15:15
Field Check on 12-DEC-2010 18:41

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far

Ratio	2827	88	3714	110
	32.020		33.764	
Field Calibrator at Base			Calibrated (cps)	
			2427	3514
Ratio			0.691	
Field Check			Calibrated (cps)	
			2331	3387
Ratio			0.688	

Neutron Constants MDN 306			Last Edited on 05-DEC-2010,14:15	
Neutron Source Id	P44384B			
Neutron Jig Number	NJ6584			
Epithermal Neutron	No			
Caliper Source for Processing	Density Caliper			
Stand-off	0.00		inches	
Mud Density	1.00		gm/cc	
Limestone Sigma	7.10		cu	
Sandstone Sigma	7.00		cu	
Dolomite Sigma	4.70		cu	
Formation Pressure Source	None			
Formation Pressure	0.00		kpsi	
Temperature Source	None			
Temperature	20.00		degrees F	
Mud Salinity	0.00		kppm	
Formation Fluid Salinity Source	None			
Formation Fluid Salinity	0.00		kppm	
Barite Mud Correction	Not Applied			

FE Calibration MFE 179			Base Calibration on 02-DEC-2010 11:09 Field Check on 12-DEC-2010 19:15	
Base Calibration				
	Measured		Calibrated (ohm-m)	
Reference 1	0.0		0.0	
Reference 2	962.5		126.8	
Base Check			280.6	
Field Check			280.5	

FE Constants MFE 179			Last Edited on 12-DEC-2010,18:52	
Running Mode	No Sleeve			
MFE K Factor	0.1268			
Caliper Source for FE correction	Density Caliper			
Caliper Value for FE correction	N/A		inches	
Rm Source for FE correction	Temperature Corr			
Temp. for Rm Corr.	MCG External Temperature			
Stand-off	0.5		inches	

Sonic Constants MSS 319			Last Edited on 12-DEC-2010,21:23	
Maximum Boundary Contrast	100.00		micro-sec/ft	
Fluid Transit Time	189.00		micro-sec/ft	
Limestone Transit Time	47.50		micro-sec/ft	
Sandstone Transit Time	55.50		micro-sec/ft	
Dolomite Transit Time	43.50		micro-sec/ft	
Sonic used for Porosities	3-5' Compensated Sonic			
Correction for Sonde Skew	Applied			
Cycle Stretch Algorithm	Applied			
MN3FT	N/A		micro-sec	
MX3FT	N/A		micro-sec	
Hunt-Raymer Constant	83.13		micro-sec/ft	
Sonde Mode	Full Waveform			
Hole Type	Open Hole			
Sonde Parameters				
	Measured		Calibrated	

Offset 0.0000 0.0000
 Free Pipe 0.0000 0.0000

Peak Amplitude Source 0

Waveform	Start Time (micro-sec)	Width (micro-sec)	Pre Gain	Start Gain	Discriminator (mV)
3'	N/A	N/A	N/A	N/A	N/A
4'	N/A	N/A	N/A	N/A	N/A
5'	N/A	N/A	N/A	N/A	N/A
6'	N/A	N/A	N/A	N/A	N/A

Processed Fixed Gate Parameters

Waveform Used For Processing	3 foot	Discriminator (mV)	Depth (ft)
Start Time (micro-sec)	End Time (micro-sec)		
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00

Full Waveform Parameters

Use 3' Waveform to derive TR	Yes	
Use 4' Waveform to derive TR	Yes	
Use 5' Waveform to derive TR	Yes	
Use 6' Waveform to derive TR	Yes	
3' Waveform Discriminator Level	0.30	mV
4' Waveform Discriminator Level	0.30	mV
5' Waveform Discriminator Level	0.15	mV
6' Waveform Discriminator Level	0.15	mV
3' Waveform Filter	None	
4' Waveform Filter	None	
5' Waveform Filter	None	
6' Waveform Filter	None	
Semblance Level	0.50	
Semblance Window Width	120.00	micro-sec
Sonic 1 Despiker	30.48	micro-sec/ft
Sonic 2 Despiker	30.48	micro-sec/ft

High Resolution Temperature Calibration MAI 106

Field Calibration on 04-DEC-2010,02:44

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	75.00	75.00

High Resolution Temperature Constants MAI 106

Last Edited on 10-NOV-2010,07:35

Pre-filter Length 11

Induction Calibration MAI 106

Base Calibration on 22-NOV-2010,16:09

Field Check on

Base Calibration

Test Loop Calibration Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	16.5	486.3	9.3	966.2
2	5.8	391.9	7.6	821.4
3	3.0	262.9	5.2	566.0
4	1.4	138.3	2.6	279.2

Array Temperature 74.6 Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0
Deep	0.0	0.0	0.0	0.0
Medium	0.0	0.0	0.0	0.0
Shallow	0.0	0.0	0.0	0.0

Array Temperature 0.0 0.0 Deg F

Induction Model	RtAP-WBM		
Caliper for Borehole Corr.	Density Caliper		
Hole Size for Borehole Correction	N/A	inches	
Tool Centred	No		
Stand-off Type	Fins		
Stand-off	0.50	inches	
Number of Fins on Stand-off	6.0000		
Stand-off Fin Angle	60.00	degrees	
Stand-off Fin Width	0.5000	inches	
Borehole Corr. Rm Source	Temperature Corr		
Temp. for Rm Corr.	MCG External Temperature		
Squasher Start	0.0020	mhos/metre	
Squasher Offset	N/A	mhos/metre	

Borehole Normalisation			
DRM1	0.0000	DRC1	0.0000
DRM2	0.0000	DRC2	0.0000
MRM1	0.0000	MRC1	0.0000
MRM2	0.0000	MRC2	0.0000
SRM1	0.0000	SRC1	0.0000
SRM2	0.0000	SRC2	0.0000

Calibration Site Corrections			
Channel 1	0.00	mmhos/metre	
Channel 2	0.00	mmhos/metre	
Channel 3	0.00	mmhos/metre	
Channel 4	0.00	mmhos/metre	

Apparent Porosity and Water Saturation Constants			
Archie Constant (A)	1.00		
Cementation Exponent (M)	2.00		
Saturation Exponent (N)	2.00		
Saturation of Water for Apor	100.00	percent	
Resistivity of Water for Apor and Sw	0.05	ohm-m	
Resistivity of Mud Filtrate for Sw	0.00	ohm-m	
Source for Rt	0.00		
Source for Rxo	0.00		

Caliper Calibration MPD 220

Base Calibration on 02-DEC-2010 14:05
Field Calibration on 05-DEC-2010,14:05

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	14544	4.00
2	23056	5.96
3	30704	7.98
4	38811	9.86
5	47936	11.88
6	N/A	N/A

Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	8.00	7.98

Photo Density Calibration MPD 220

Base Calibration on 02-DEC-2010 13:43
Field Check on 12-DEC-2010 18:32

Density Calibration				
Base Calibration				
		Measured	Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	52968	16941	53237	19445
Reference 2	24124	2408	25135	2545
Field Check at Base				
	1190.6	1206.3		
Field Check				
	1189.1	1202.5		

PE Calibration

	Measured	Calibrated		
	WS	WH	Ratio	Ratio
Background	214	1053		
Reference 1	17948	52776	0.343	0.320
Reference 2	6642	23976	0.280	0.274
Field Check at Base				
	214.4	1052.8		
Field Check				
	214.3	1051.7		

Density Constants MPD 220 Last Edited on 12-DEC-2010,18:52

Density Source Id	P44263B
Nylon Calibrator Number	532
Aluminium Calibrator Number	532
Density Shoe Profile	8 inch
Caliper Source for Processing	Density Caliper
PE Correction to Density	Not Applied
Mud Density	1.10 gm/cc
Mud Density Z/A Multiplier	1.11
Mud Filtrate Density	1.00 gm/cc
Dry Hole Mud Filtrate Density	1.00 gm/cc
DNCT	0.00 gm/cc
CRCT	0.00 gm/cc
Density Z/A Correction	Hybrid
Matrix Density (gm/cc)	Depth (ft)
2.68	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

AFTER SURVEY CALIBRATION

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Gamma Check MCG 287 Field Calibration on 12-DEC-2010,18:47
After Survey Check on 13-DEC-2010 05:39

	Before (API)	After (API)
Background	86	78
Calibrator (Gross)	613	605
Calibrator (Net)	527	527

Neutron Check MDN 306 Before Survey Check on 12-DEC-2010 18:41
After Survey Check on 13-DEC-2010 05:45

Near (cps)		Far (cps)	
Before	After	Before	After
2331	2352	3387	3422
Ratio			
Before	After		
0.688	0.687		

FE Check MFE 179 Before Survey Check 12-DEC-2010 19:15
After Survey Check on 13-DEC-2010 05:03

Before (ohm-m)	After (ohm-m)
280.5	280.6

Induction Check MAI 106 Before Survey Check on
After Survey Check on 13-DEC-2010 05:05

Channel	Before Survey (mmho/m)		After Survey (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	14.2	3748.6
2	0.0	0.0	30.8	3455.7
3	0.0	0.0	29.8	3023.1
4	0.0	0.0	20.2	2003.1
Deep	0.0	0.0	18.7	1962.6

Medium	0.0	0.0	43.2	4027.0
Shallow	0.0	0.0	45.3	5109.4
Array Temperature		0.0		56.8

Photo Density Check MPD 220

Before Survey Check on 12-DEC-2010 18:32

After Survey Check on 13-DEC-2010 05:02

Density Check

	Near		Far	
	Before	After	Before	After
	1189.1	1184.7	1202.5	1206.2

PE Check

	Before	After
WS	214.3	214.4
WH	1051.7	1050.4

DOWNHOLE EQUIPMENT

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SHA-J.A Compact Swivel Head Adaptor
SHA 314 Length: 2.30 ft Weight: 22.0 lb

Compact Gamma
MCG 287 Length: 8.70 ft Weight: 63.9 lb

Compact Neutron
MDN 306 Length: 5.04 ft Weight: 50.7 lb

Compact Density/Caliper
MPD 220 Length: 9.59 ft Weight: 90.4 lb

SKJ-D.A Compact Knuckle Joint
SKJ 154 Length: 2.17 ft Weight: 24.3 lb

Compact Focussed Electric
MFE 179 Length: 6.03 ft Weight: 48.5 lb

Compact Sonic
MSS 319 Length: 12.52 ft Weight: 72.8 lb

Compact Induction
MAI 106 Length: 10.81 ft Weight: 48.5 lb

Total Length: 57.16 ft Weight: 421.1 lb



Tool Zero (0.13ft from bottom)
All measurements relative to tool zero.

COMPANY	BILL BARRETT CORPORATION
WELL	MILLER FEDERAL 24D-31-691
FIELD	GIBSON GULCH
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	U.S.A. / COLORADO

Elevation Kelly Bushing	6288.00	feet	First Reading	7632.00	
Elevation Drill Floor	6287.00	feet	Depth Driller	7626.00	feet
Elevation Ground Level	6266.00	feet	Depth Logger	7635.00	feet



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